

# THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

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## Limestone Soil of Kentucky.

*Remarks on the Agricultural Value of the Blue Limestone of Kentucky; with its analysis:* By ROBERT PETER, M. D., Prof. of Chem. in the Medical Department of Transylvania University, Lexington, Ky. THE region in which Lexington is situated, has long been justly celebrated for the great and lasting fertility of its soil; which, by the production of its luxurious vegetation, plentiful crops of corn, and herds of fat animals, evinces that it is rich in the elements which are essential to vegetable, as well as to animal growth.

Unlike the soil of many other parts of the world, heavy production does not quickly exhaust it. A field which has been cultivated in corn for twelve or twenty years, may be made almost as fertile as it was at the commencement, by resting it with a clover crop, or depasturing it for a time in grasses. It is, consequently, not the custom of the country to pay much attention to manures; and some of our farmers even consider the accumulations about their stables as a nuisance.

Her fertile soil enables Kentucky to export, from her rich counties, an immense number of hogs, cattle, mules and horses, a large quantity of hemp, and a considerable amount of Indian corn. The corn crop in Kentucky for 1847, was estimated at 62 millions of bushels, and during the past year, (1848,) at least 250,000 hogs have been sent abroad, to be slaughtered and consumed.

It cannot be supposed, however, that the soil will continue to maintain its fertility, under the immense drain made upon it by the exportation of its products; and old inhabitants have been for some time complaining that the long cultivated soil has undergone visible deterioration.

Since chemistry has given her assistance to agriculture, the reason of this has been made very clear. Every product of the soil takes from it, in notable quantity, certain mineral substances which are essential to its growth and formation. These are known to be, alkaline salts, sulphur and its acids, phosphoric acid, lime, oxide of iron, silica, &c. These substances are as essential to animal existence as they are to vegetables; and both animals and vegetables can no more subsist or thrive with a deficiency of these mineral ingredients than they can without water.

The saline and earthy matters, which form the ashes of plants and their products, are the same which are essential to the bones and other solids and the fluids of the animal body. Where they are abundant in a soil, other things being propitious, the vegetation becomes rich and matures a plentiful harvest, and animals grow and fatten easily on the products; for the plant draws them from the soil and works them up into forms adapted to animal nutrition. On the contrary, where they are deficient in the soil, vegetation is scanty, and the animal races dwindle and starve.

The fertility of the soil depends more on these mineral ingredients than on any other, although they really

form the smallest relative proportion of the weight of vegetables and animals;—for the other ingredients of the organized bodies, viz: carbon, hydrogen, nitrogen and oxygen, are derived from the atmosphere and from water, which are universally diffused; while these mineral ingredients are the properties alone of the soil, and when present in sufficient quantity, even in pure, earthy matter of any kind, they stimulate the growth of vegetables, which by their final decomposition, soon fill the earth with humus, and form the rich vegetable mould.

Amongst the most important of these is phosphoric acid, which, in union with lime, magnesia, and perhaps oxide of iron, enters into the structure of all vegetables, and the more nutritious the vegetable substance, the larger is its proportion of the acid. The grains are peculiarly rich in it:—Boussingault remarks that no seed is known which does not contain it. Hence, a plant, growing on a soil which does not afford it, never matures its seed, and the production of seeds of any kind speedily exhausts a soil.

Phosphoric acid is equally essential to animal growth, it being a constituent part of all the organs of their body, and particularly of their bones, the earthy matter of which being mainly phosphate of lime.

An idea of the quantity of phosphoric acid which is annually taken from the soil, may be obtained by studying the chemical analyses of the ashes of vegetable substances.

Indian corn gave me more than 1 per cent. of ashes, of which 50 per cent. is phosphoric acid. Wheat gives nearly  $2\frac{1}{4}$  per ct. of ashes of which more than 60 per ct. is phosphoric acid. Oats and rye contain it in but a little smaller proportion, and every 1,000 pounds of dried hay contains about  $3\frac{1}{2}$  pounds of this acid. In short, the ashes of wood and all vegetable substances, are rich in phosphates, and hence the utility of even leached ashes as a fertilizer.\*

In every bushel of Indian corn sent out of the state, we export about one-third of a pound of phosphoric acid; and in the bones and body of every hog, there is at least two pounds of this substance; so that in her 250,000 hogs, exported during the year just terminated, Kentucky has sent off at least 500,000 pounds of this valuable ingredient of her soil. Taking into consideration the whole of her exports, in animal and vegetable products, the amount of phosphoric acid sent every year from the fertile counties alone, must be much above a million of pounds.

As this indispensable ingredient exists but in a small relative proportion in the best soils, continued exportation of products, without a corresponding importation of the mineral elements of animal and vegetable substances, must impoverish the country.

\* I refer the reader to Boussingault's *Rural Economy*, (translated by Geo. Law, and published in 1845, by Appleton, N. York) for many interesting facts in this relation; and many reports of the analysis of ashes of vegetables are given by Dr. W. Knop, in the Vol. XXXVII of the *Journal für Praktische Chemie*—p. 31.

In some parts, Guano, which is rich in these matters, can be and is used, to supply phosphates. In England it is found advantageous to import bones, from a distance, and to grind them to powder, to spread them on the soil. Which application increased the product, in some places, in two and even three fold proportion.

In a country which consumes its own products where they are raised, and in which the animal excretions are not allowed to be washed away in the streams and rivers, the soil is kept fertile by the constant restoration to it of these mineral ingredients, in the bones and excretions of animals which are applied to it. And political economists see in this fact, apart from other considerations, an immense advantage in a *home consumption*, by home manufacturers;—in “placing the anvil by the side of the plow.” But when, as is the case in Kentucky at present, there is a constant exportation of vegetable and animal products, which are rich in the most valuable and indispensable ingredients of the soil, the fatness of the earth is steadily and certainly transferred from the exporting to the importing country; and the land of the former will become poorer and poorer, unless these valuable ingredients are, from some source, resupplied to it.

Reflections of this kind caused me to turn my attention to the rock stratum which underlies this fertile region, with a hope of finding in it some compensation for this annual loss of the phosphates and the other essential elements of the soil. This rock is of the “Blue Limestone formation,” a lower member of the *Silurian formation* of the English geologists. It is the equivalent of the “Trenton Limestone” of the New-York geologists; and like that, is full of the fossil remains of marine animals;—the shells, crusts, coralloid structures, of the ancient denizens of the primeval ocean, under which it was evidently deposited;—giving promise, to the analyst, of the presence of all those ingredients which are essential to animal as well as to vegetable structures, and which have been already referred to as existing in all fertile soils.

Our limestone presents various characters in its different layers; some being hard, of a semi-crystalline structure, and of a bluish grey color; other specimens are more earthy in their composition, more shaley, of a darker color, falling readily to powder on exposure to the atmospheric agencies; all being in layers of greater or less thickness, the solid masses being separated generally, by shaley matter.

The hard gray rock is quite durable in its nature, and is extensively employed for turnpikes, for the foundation of houses, steps and walls; but all varieties change to a dirty buff color on the surface, in time, by the peroxidation of iron; and disintegrate more or less rapidly, on exposure to the air: in consequence, doubtless, of the presence of protoxide and sulphuret of iron in the rock, which break up its structure when they unite with the oxygen of the air; as well as by reason of the presence of its numerous shells, and other fossil remains, which occasion minute fissures, into which water and air penetrate, and with the aid of frost, cause the rock finally to crumble.

The hard layers burn into very good fat lime, which makes good mortar, but in consequence of the quantity of oxide of iron present in it, the color is not as pure as is desirable for nice whitewashing.

But few trials have been made of the fertilizing powers of this limestone by our farmers, although it is so abundant and so easily to be obtained; no doubt because new land is cheap in the United States, and labor dear; more especially, because no immediate want of fertilizers is felt by our agriculturists. But on the edges of our McAdamized roads, the corn rows which receive the powdered limestone in the form of dust, are observed to be more flourishing than the others; and in pla-

ces where the soil is very thin, and filled with fragments of the limestone, the product is always very good, when the season is not too dry. Gardeners, who have employed it on their small crops, speak highly of its utility as a fertilizer.

It has been the custom in England and other countries, as well as in some part of the United States, to use lime very freely on the arable land. It is, indeed, considered almost essential to the production of wheat; and enormous quantities of it are spread in some localities. A difference of opinion exists as to the *manner* in which the lime acts to improve the soil; for example, it is supposed that it aids the solution of hard vegetable substances;—that it brings the silex of the soil to a soluble condition, and that it warms the earth and stimulates vegetation in some indefinable manner. But it is probable, that if correct analyses were made of those limestones which are known to be the best fertilizers, another reason for its utility would be found in the presence in it of the essential mineral elements of vegetables, viz: phosphates of lime and magnesia, sulphate of lime, oxide of iron, potash, soda, &c.

Chemical analyses of limestones and of soils, as they are ordinarily performed, are of but little practical value even to scientific agriculturists, because they do not include the estimation of the phosphates and the alkalis; which are the really essential ingredients, but which, in consequence of their existence in comparatively small proportions, and because considerable labor and some skill are required to estimate them accurately, are usually overlooked by the analyst.

It would be far better, for agricultural purposes, to estimate *only* the phosphates and the alkalis, in a soil, a marl, or a limestone, than to give only the silex, the alumina, the oxide of iron, lime, and vegetable matter; which really are of less importance in this relation.

During the past month or two, in my leisure moments, I have submitted to analysis, several specimens of the Kentucky Blue limestone, and have been much gratified to find my anticipations realised in relation to its agricultural value, as will be seen by reference to the results given below.

Specimen No. 1, is of the hard grey limestone; it was dug out of a well in the city of Lexington; it contains geodes lined with brown spar, pearl spar, calc spar and fluor spar and the usual fossils; its specific gravity is 2.45 in a dry specimen. On analysis, it was found to be composed of the following materials; viz:

Carbonic acid.....	36.675
Phosphoric acid.....	1.350
Sulphuric acid, .....	807
Lime.....	47.046
Magnesia.....	900
Alumina and oxide of iron.....	9.880
Fine sand and silicates.....	1.790
Moisture and loss.....	1.552

100.000

Specimen No. 2, from the hard thin layers which are more superficial than the first in this locality, yielded:

Carbonic acid.....	40.53
Phosphoric acid, .....	36
Sulphuric acid not estimated.	
Lime.....	50.97
Magnesia, .....	66
Oxide of iron.....	32
Alumina.....	15
Sand and silicates, .....	6.52
Moisture and loss.....	49

100.00

In addition to these ingredients, potash and soda were obtained from the limestone, whenever the proper processes were employed; in one case as much as 0.0487 per cent. of potash; in another, 0.0058 per cent.

In two other specimens the proportion of sand, &c., was found to be as much as 13.5, and 20.3 per cent. As much variety, no doubt, exists in the composition, as in the appearance of the different layers of the limestone.



Iron is present in the blue and grey rock partly in the form of protoxide; there is also some sulphuret of iron diffused throughout it, which by oxidation produces sulphate of lime or gypsum. Sulphur, it is well known, is an important element of plants, especially of the most nutritious kinds, as the cabbage; it is also found in the mustard, the turnip, and in almost all the animal tissues.

Our limestone therefore contains all the mineral ingredients necessary to organic nutrition; viz. phosphorus, sulphur, lime, magnesia, oxide of iron, silice and potash, and soda in small quantities.

Some specimens appear to contain a larger proportion of phosphoric acid than is stated above; one analysis gave me as much as 2.57 per cent. as estimated by the precipitated phosphate of iron. As the presence of this acid, in the rock, is a fact of great importance, and the processes for its correct estimation require great care, I have taken unusual pains to arrive at positive certainty in regard to it; and in consequence of my desire to separate it fully from all impurities, my estimation of its percentage is, no doubt, below the truth, from the unavoidable loss which this substance sustains in the various processes used. The chemist will understand this when I describe these processes.

1. The ground limestone was dissolved in hydrochloric acid, with a little nitric, and the solution filtered from the sand and silicates.

2. Pure ammonia, and chloride of ammonium, were added to the boiling solution, and the precipitate was, after careful washing, re-dissolved in a little hydrochloric acid. This contained oxide of iron, alumina and the phosphates.

3. Acetate of soda was boiled with the solution (2,) sometimes with the addition of some chloride of iron, which threw down all the phosphoric acid as phosphate of iron. There was generally enough oxide of iron in the limestone to combine with all the phosphoric acid.

4. The precipitated phosphate of iron was re-dissolved in hydrochloric acid, with tartaric acid and ammonia, and the phosphoric acid was thrown down from the solution by sulphate of magnesia.

5. This precipitated ammonio-phosphate of magnesia was re-dissolved in hydrochloric acid, and precipitated again by ammonia, and, after thorough washing, was ignited and weighed, and the phosphoric acid estimated.

Not content with this, the phosphate was dissolved in nitric acid, and the phosphoric acid carefully precipitated by nitrate of silver and ammonia: from the precipitated phosphate of silver the silver was removed as chloride, and by the evaporation of the liquid, the phosphoric acid was obtained in the glacial state, by gentle ignition in a platinum capsule.

The original precipitate (2) containing the phosphates, was also treated in another way. Dissolved in nitric acid, acetate of lead was added to its solution, until all the phosphoric acid was thrown down as phosphate of lead; which, after being well edulcorated, was re-dissolved in a little nitric acid, and the lead separated by means of sulphuretted hydrogen. The filtered liquid evaporated as above, yielded the glacial phosphoric acid; which, re-dissolved in water, was estimated as pyro-phosphate of magnesia.

In the glacial form, by this last process, the phosphoric acid weighed 3 per cent. after moderate ignition. But this acid is so hygrometric that it cannot be correctly estimated in the uncombined state.

In the estimation of the magnesia, the usual mode is to precipitate it from the filtrate\* (2) by adding phosphate of soda; but as the ammonio-phosphate of magnesia is not wholly insoluble in a solution of chloride

of ammonium, I used the process of Berzelius, viz. ignition with the oxide of mercury; or, what is still more convenient, a modification of the process of Boothe, as follows:—Sulphuric acid in sufficient amount was added to filtrate (2,) and the mixture was concentrated by evaporation. Alcohol, in equal volume was then added, and the precipitated sulphate of lime was washed with diluted alcohol. The sulphate of lime, ignited and weighed, gave the proportion of lime, while the filtrate gave on evaporation, the magnesia in the form of sulphate.

The proportion of carbonic acid was ascertained by the process of Fresenius.

I give this abstract of chemical processes that competent persons may be enabled to judge as to the value of the analyses.

It must be evident, from the foregoing facts, that the Blue Limestone of Kentucky, should it generally be found to resemble that above described, will be a valuable agricultural resource, when the soil begins to show the inevitable consequences of the constant exportation of its products; and that, with this immense source of fertilizing materials beneath our feet, we need never fear the thorough exhaustion of our soil.

One bushel of lime, such as specimen No. 1, containing about 1½ lb. of phosphoric acid, will yield phosphates enough for 5 bushels of corn; while 2 or 3 bushels of lime would supply all that are carried away in the bones and body of a hog.

By actual experiment, within my own knowledge, of burning 2700 bushels of lime in one rude kiln;—the rock having been purchased at 50 cents per perch of 24½ cubic feet;—the wood at \$3 per cord, and the labor estimated at 75 cents per day,—it is found that lime can be obtained for 10½ cents per bushel.

Our farmers, with their own wood, and farm hands, can burn it much cheaper, and I do not doubt that if they make the experiment on a sufficiently large scale, they will find their labor and expenditure well repaid; whether they use it in the cornfield, on their wheat, or clover, or on the orchard. All vegetables require the elements which are found in it, and it cannot come amiss any where, when applied in the proper manner.

It may be used in the proportion of from 20 to 50 bushels to the acre; spread in the fall, on the surface, in the dry slacked state.

It is especially recommended for the potato crop. Potatoes, and particularly the stalks, are found to contain a very large proportion of phosphoric acid in their ashes, and it is probable that their liability to "the rot" may have some relation to the deficiency of phosphates in the soil. Jan. 31, 1849.

## Suggestions for Farmers.

### System, Order, and Economy.

In the last number of *The Cultivator*, it was shown how the absence of Order in relation to the plow, worked a loss to the farmer of more than three dollars per acre; and allusion was made to the necessity for sound judgment in the selection of tools, implements, and machinery for our farm purposes. To make this discretion more apparent, the following list of plows with their relative position as to merit, is selected from the various volumes of Transactions of the State Agricultural Society—the list cannot fail to be useful to every farmer, exhibiting a wide range in the force required for working them, and so far, is a guide to the selection, provided the material of which they are respectively made, is equally strong and good. It will be noticed that the resistance offered to our horses in plowing, varies according to the construction of the plow.

\* Filtrate, i. e. the liquid filtered from the precipitate.

from 225 pounds up to 500 pounds,—a difference of labor seriously affecting Economy.

Agricultural Mechanism, is by no means confined to New-York; therefore, before we proceed to examine the list alluded to, we may with signal advantage, examine the handiwork of our neighbors. As their mode of computing resistance differs from the method used in this State, the plows could not be conveniently arranged in the table; they use the Dynamometer in the same way as used at our State fairs, but the ratio of resistance is thus stated; if the force of the team applied is equal to the raising of 336 pounds over a single pulley, and the depth of the furrow is  $6\frac{1}{2}$  inches with a width of 13 inches, then multiply 13 by  $6\frac{1}{2}$  and you have 84 and a fraction; then if 336 pounds of force will take up and turn over 84 inches of earth, 112 pounds will turn 28 inches. It was in this way, the eastern plows were tried by the Massachusetts Agricultural Society, for their premiums of one hundred dollars, and seventy five dollars, for the best plows—one plow for *lapping* the furrows, the other for *laying them flat*.

Tried in this way, the power in each case being 112 pounds, the plows respectively turned over the quantity of earth as stated in figures, and thus exhibited their relative resistance—i. e.

Plows for *lapping* furrows:—

Charles Howard's.....	29 $\frac{1}{2}$ inches
Ruggles, Nourse & Mason's,.....	24 "
John Wilson's,.....	21 $\frac{1}{2}$ "

Plows for *flat* furrows:—

Prouty and Mears'.....	27 $\frac{1}{2}$ inches.
This plow took the premium of \$100.	
Charles Howard's,.....	25 "
Ruggles, Nourse & Mason's,.....	24 "

Other plows were tried, but all offered greater resistance than the foregoing. The above claim the careful attention of the prudent farmer.

Let us now examine the list of plows tested in this state.

Makers.	Wheremade	Name of Plow.	Resistance.	Depth of furrow.	Width of furrow.
S. W. Chase,.....	Amsterdam,	Montgomery County	225	5 inch.	11 inch's
T. D. Burrall,.....	Geneva,....	{ Shell Wheel,.....	241 $\frac{1}{2}$	5.8	12.8
		{ Geneva,.....	325	6	13
E. Sleight,.....	Fishkill,....	Revenue Cutter,....	250	5 $\frac{1}{2}$	12
Miner, Horton & Co.,....	Peekskill, ..	Peekskill,.....	255		
A. Hawley,.....	Brooklyn, ..	Bergen,.....	275	6	12
H. Delano,.....	Onondaga, ..	Diamond,.....	257 $\frac{1}{2}$	6	13
M. H. Coddling,.....	Ontario,....	American,.....	330	5 $\frac{1}{2}$	14
J. Waite,.....	Albion,.....	Veto,.....	335	6	12
S. W. Hall,.....	Livingston, ..	Williamsport, ..	337	6	12
P. Elyea,.....	Peekskill, ..	Caledonia,.....	345	6	12
T. Mercer,.....	Peekskill, ..	Peekskill,.....	348	6	12
Miners,.....	Peekskill, No. 22, ..	Peekskill,.....	350		
Peter Proseus,.....	Columbia,....	Columbia,.....	350	5	13
Oxford,.....	Chenango, ..	Oxford,.....	371	6	12
Brainerd & Comstock, ..	Diamond,.....	Diamond,.....	375		
Wilson,.....	Oneida,....	Oneida,.....	381		
J. S. Tefts,.....	Erie,.....	Washington,.....	381	6	12
Hicks & Bailey,.....	Wyoming, ..	Wyoming,.....	383	6	12
E. Davis,.....	Worcester County, ..	Worcester County, ..	386	6	12
P. D. Wright,.....	Rochester, ..	Cayuga County, ..	388	6	12
E. Richardson,.....	Iron Beam, ..	Iron Beam,.....	388	6	12
C. Seymour,.....	Lockport, ..	Opposition,.....	397	6	12
H. Ward,.....	Avon,.....	Livingston County, ..	400	6	12
E. Wilson,.....	Vernon,.....	Diamond,.....	400		
Ruggles, Nourse & Mason, ..	Mass,.....	Eagle,.....	415	6	12
R. C. Stiles & Co.,.....	Ontario,....	Ontario,.....	431	6	12
Moore,.....	Self Sharpenor, ..	Self Sharpenor, ..	437 $\frac{1}{2}$	6	14
J. Van Bronklen,.....	Niagara,....	Middleport,.....	438	6	12
Gaylord,.....	Auburn,.....	Auburn,.....	475		
Asa Beebee,.....	Black Hawk, ..	Black Hawk,.....	475		
Bailey, Whittier & Co.,....	Utica,.....	Utica,.....	475		
J. C. Fitch,.....	Livingston County, ..	Livingston County, ..	483	6	12
Wm. Frater,.....	Otsego,....	Scotch Plow,.....	500		

It will be noticed that the Shell Wheel plow, and the Geneva plow, by the same maker, (Burrall of Geneva) are placed side by side, purposely, to draw attention to the effect of a well formed and well applied wheel; for these plows are in all respects the same, save only, the use of the shell wheel in the place of the land side; this wheel produces the difference stated in the table, in the draft of the two plows of more than eighty-four

pounds in favor of the wheel; a difference which, if given by the wheel to other plows named in the list, would present for our selection, a rare and most choice assortment. Thus, if the excellent "Center Draft" of Prouty and Mears, which I believe offers a present resistance of 292 pounds could be reduced by the wheel to 208 or 210 pounds, it would exceed every other known plow. The same as to Delano's Diamond, and so also, as to Ruggles, Nourse and Mason's admirable Eagle, if it could be reduced by the wheel, to 331, we need look no further for all that is needful in the form of plows. That word *if* arrests our progress for the present; nevertheless, with the list before us, no farmer can be excused for *imperfect* plowing, let his soil be what it may. Any reasonable depth or breadth of furrow may be had,—the furrow slice may be laid perfectly flat and true, or it may be lapped with precision—our horses need no longer show galls and scars, nor upbraid us with cruelty; on the contrary, when they have toiled through the heat of the summer, and return home from the last furrow of the season, they will exhibit their fat and shining sides, gamboling in the last rays of the setting sun, as if to express happiness in a duty well performed, and gratitude to a liberal, careful master.

It is no small matter that plow makers present their work to us in a highly finished condition, and in this respect, we have reason to applaud Prouty, Mears & Co., and Ruggles, Nourse & Mason—the polish of their mould boards and other metallic parts prevent a large amount of resistance, as I well know by the use of "a Center Draft;" in this matter, our eastern friends have shown *heretofore* more *order* and *economy* with neatness, than was to be found among us of New-York. Now however, I for one, am using plows equal in all *these* details, to those of Massachusetts.

A farmer always does *love* his horses, if his own

heart is hung in the right place; and a man thus constituted will be loved by his horses; had they the power of speech, they would entreat us to seek for, and use, such plows as offer the least resistance to their willing shoulders, consistent with an expeditious and good performance of their work;—let us then give more attention, more consideration, to the due selection of these most important implements.

In making our selection, however, we must remember that the tool must be adapted first to the nature of our soil—so as most easily to raise it and move it—and next, that it be so constructed as perfectly to turn it over. In a stiff clay we find the long Scotch plow presenting a severe resistance, while our shorter breasted plows move through it with comparative ease; the reason is, that more surface is presented to resistance in the long plow. In light soils, this is not so important a consideration.

My own experience has led me to the use of Burrall's Shell wheel and the Geneva plow, Prouty & Mear's Center Draft, the Eagle and Chase's Amsterdam. I have others in use, but prefer the foregoing.

For many ages, the Harrow has been our familiar friend, without change in form or feature from the earliest time, until within the last twenty years,—and its uses have ever been to follow the plow, breaking the



upturned masses into a pulverised condition; to draw out weeds by their roots, exposing them to the air and death; and to cover over seeds when sown on the prepared earth. It is somewhat remarkable that the importance of these operations should not have earlier produced improvements, leading to economy; nor is it less strange that on *many*, I had nearly said most farms, this operation is performed with an imperfect tool, or, in a most imperfect manner. The want of *Order* induces the first error; the want of *System* causes the latter—and from this also, we see too often, the custom of entrusting the harrow to boys, whereas harrowing is in fact, when *properly* done, a laborious business, for to be well done, we need fast horses, a *quick* movement and careful over lapping of the lines.

What is the inevitable consequence of slow and unsteady harrowing? or of work performed with an imperfect implement? The ready answer is, a rough and uneven field, unequal distribution of seed and its destruction by exposure; of course, a diminished product per acre, pressing its penalty upon the farmer, who “don’t care”—or thinks “its good enough,”—or “as good as his neighbors.” Such men are without order or system; as to economy, they know not its meaning.

The chief improvement in the harrow, has been in its form, not effecting any very decided general advantage; but its defects have led to the introduction of another implement, the *cultivator*, which in a great degree, supercedes the harrow, and renders the second plowing of fields often useless or unnecessary.

The cultivator, when first introduced, was confined to the corn field and potato crop—but lately it has been so constructed and improved by Mr. Ide and others, as to follow the plow very successfully in the preparation of the ground—but more especially to perform all the necessary operations of a fallow after the first plowing.

This implement or cultivator, as made by Mr. Tracy, of Wayne county, and by him introduced into Ontario and Seneca counties, seems to be an admirable substitute for the purpose of cross-plowing, and all the usual work of the harrow; being so constructed as to cut six inches deep, or, only to skim the earth, as may be desired. Here then we have a labor-saving machine, for, as it is 4 ft. 6 wide, with four teeth in the rear, and three in the front row,—it acts at the same time, on a breadth of soil equal to at least four “bouts” of the plow—stirring the earth 6 inches deep. Substituting the cultivator for the plow, after the first plowing, the gain, by its use instead of the plow is, at least sixty-two and a-half cents per acre, or, the difference in cost between plowing and harrowing—an item of importance in every field of grain; the thinking farmer will readily find other advantages.

I cannot discover any trials of the cultivator, to show us the quantity of force required for its proper use, an omission on the part of our agricultural implement makers, of more importance than they imagine; let us hope that, hereafter more anxiety will be felt to prove the saving of labor or force, not by assertion but by *measure*, and thus save us farmers from much loss of time, and disappointment.

It was intended to follow the remarks on the plow, with a consideration of the *harrow*, *cultivator* and *seed sower*; the season however, for planting corn is so near at hand, and the corn crop is so important, that I venture a repulse from your well stored columns, to show if I may, the economy with which this most valuable grain can be raised, and is produced in this part of our State.

Long Island and the valley of the Mohawk, has heretofore produced a larger amount of corn per acre, but that advantage is equalised to us of the inland counties, by the greater economy of labor and possibly of system.

A machine is in use here, produced by the ingenuity of Mr. H. L. EMERY, of Albany,\* simple, and worked by a single horse; we call it the *Corn planter*, though it is arranged for the planting of any and every kind of seed in rows or drills. When this corn planter is solidly and strongly put together—and the ground is in proper condition for planting, we plant not less than ten acres per day,—one man and one horse only being necessary for the work. The rows of corn are placed three feet or three feet six inches apart, and the seed is dropped about six to eight inches asunder in the rows.

The after cultivation, or hoeing, is effected by the horse hoe. The following results have been derived from the use of these machines:

Plowing, harrowing, hoeing and preparing 21 acres for Corn, at \$2.27 per acre, .....	\$47 67
Planting 21 acres with Emery's Planter, in two days, man and horse, .....	4
Cost of 26 quarts of seed corn, at 75 cents per bushel, ....	6 50
Husking and housing in crib, at \$3.17 per acre, .....	66 67
	<hr/> \$124 84

The yield of this field was moderate, being only 1600 bushels of ears, which at the above cost, is equal to seven cents and eight mills per bushel.

The yield of fodder was very large, but if we estimate it as low as 1½ tons per acre, then the cutting and housing of the whole fodder, say 30 tons, was \$19. 06—which added to the cost of cultivation, makes an aggregate of, .....	\$143 90
Deduct for the value of the fodder, at \$2 per ton, .....	60 00
	<hr/> \$83 90

Thus the actual cost of the 1600 bushels of ears is \$83.90, or *five cents* 24-1000 *per bushel*—or for the grain alone it is *ten cents* 48-1000 *per bushel*. Such is the result derived from the *Corn Planter*, and *Cultivator*. and *Horse Hoe*, from a moderate yield of corn. Much better results have been derived by others, from the same system and order; and I think none will deny that economy is thus well studied and practiced. *AGRICOLA. Seneca Co., N. York.*

#### Influence of Agricultural Periodicals.

THAT a great improvement has taken place among the agricultural population of the United States within the past ten or fifteen years, but more particularly in the eastern and middle sections, is a fact which I believe will not be denied. To what is this improvement chiefly to be attributed? I answer, and I think correctly, to the influence of agricultural periodicals and papers. Agriculture, although one of the noblest of callings, has been in times past grossly neglected. Like many occupations by which a subsistence may be obtained without much exercise of the mind, it began to be taken for granted that the exercise of the mind was not required, and was a matter of but little importance. Men farmed as their grandfathers had farmed, half a century before them. Agriculture, instead of improving, stood nearly still, or retrograded somewhat. Lands became worn out by bad tillage; and most of those who could escape from the plow, left their homes to seek out employment by which more money could be made with less hard physical labor. Here and there a man was to be met with who had become rich through trade or commerce, and had retired to a farm; but it was not the profit, but the pleasure of farming he had gone to enjoy. Matters were somewhat in this condition about the time of the establishing of the first agricultural papers. From that period to the present time, there has been a steady progression in agriculture.

\* For cut and description of this implement, see last vol. *Cultivator*, p. 329.

Let us glance at some of the benefits arising from these papers. I know not how other minds may view it, but for myself I may safely say, that as a practical farmer, the opportunity afforded for the interchange of thought, through agricultural papers, is one of the greatest enjoyments I have. I welcome the monthly receipt of my paper with no common interest, for from it I always expect to derive some improvement. The suggestions, coming as most of them do, from practical men, are all worthy of consideration, and although they may not all be adapted to the particular situation in which we may reside, yet they will doubtless be found of value somewhere through our widely extended country. There is an amount of useful general information to be gained from the perusal of these papers scarcely any where to be met with in the same space. We not only gain knowledge on agricultural subjects, but we become acquainted with the geography, geology, climate and productions of our vast country from Maine to Florida. We learn among other things, the important truth that even in the cold and mountainous regions of our land, by the aid of science and improved tillage, farms are made to produce crops which will compare favorably with those raised upon the smoothest plains.

The farmer is a man whose business is *at home*; he can wander but little, but it does not follow that he must be ignorant. Sitting by his cheerful fireside of a winter evening, he takes his paper in hand and begins *his travels*. At one time he is among the best farms of New England, then in western New-York—then with the rapidity of the magnetic telegraph, he visits the western and southern states. For the trifling expense of a dollar or two a year, he becomes familiar with almost every portion of the Union.

There is a sociability too, so to speak, about agricultural papers, which is truly delightful. You become acquainted not only with their editors, but with a hundred others. Situated in some remote district, where perhaps most of those around you have not yet awakened to the importance of *book farming*, and are looking with doubts and misgivings upon your mode of farming, it is indeed, truly delightful to be holding mental intercourse with many of the best farmers of the land. There is many a man among that goodly fellowship of farmers, who should I chance to meet with, strangers to me though they might be, yet would I clasp them by the hand as friends. And are they not friends? Yes—friends in the cause of agriculture. They have labored to elevate that calling, great and noble in itself, but too long neglected and trampled in the dust.

Much has been done for agriculture, but much remains to be done. Some of the recent statements before the agricultural societies, show an improvement in culture and tillage that was not even dreamed of a few short years ago. The men of New England and the middle states need these statements to encourage them onward. What are we to do by and by? is a question sometimes asked by farmers of these parts. How are we to compete with the great west? Railroads and canals are multiplying—facilities are becoming greater every day for bringing produce from those markets to our seaports. They can raise every thing cheaper than we can. What are we to do? Not sit down and mourn over our fate—not sell our farms and move there too—but stay where we are, and work head-work. Raise 100 bushels of shelled corn where we formerly raised 20; raise 2 tons of hay where we used to grow one; keep 10 cows, and good ones too, and keep them well, where we formerly did 5.

We may not be able to do so this year, or next, but begin the good work and it will not be many years before we can. Industry, science, economy—must be brought to aid us in the fulfilment of our purpose.

Who are the men destined to rise in the agricultural world? I answer, those who read and reflect. Now, more than ever, has a time come when the farmer must think. He that worketh ever so hard with his hands, if he work not with his head too, will find his intelligent neighbor far outstripping him, with half the physical labor he exerts. And those men, so wise in their own conceit as to suppose that they can learn nothing from a book or paper, on farming, will discover their error, perhaps too late to retrieve it. H. C. W. Putnam Valley, N. Y., Feb. 1, 1849.

## Profits of Sheep Husbandry.

### Farming in Vermont.

EDS. CULTIVATOR—"What is the most profitable course of farming in your section of the country, and what is the cost of producing a pound of Merino wool?" These inquiries are frequently made, and they are very important questions, particularly as to those who have been grain growers, and are about to engage in sheep husbandry, or in the making of butter and cheese. I find it very difficult to adopt any method which will give a true estimate of the cost of producing a pound of wool, or of butter and cheese. I find the estimates that have been made vary greatly in their results. Should I attempt to answer these questions, I could hardly hope for better success than has attended the labors of others. In this section, grain is out of the question. There is no more raised than is necessary for our own consumption, and of wheat not sufficient for that. To cattle and sheep, the farmers of Vermont look for the most of their profits of farming.

I have looked at the estimates of different individuals, of the profits of sheep husbandry and of dairies. There is one on sheep husbandry, by H. S. Randall, Esq., of Cortland, N. Y., which is incorporated in a report on the value of sheep husbandry, read before the agricultural society of Pendleton, South Carolina, and is published in the Patent Report of 1847, page 505. According to Mr. Randall's estimate, the profits of sheep husbandry, are over 27 per cent. on the capital invested; and the cost of producing a pound of wool less than three cents; and a calculation, based upon Mr. Randall's estimate, makes the profits of sheep husbandry in South Carolina, over 100 per cent. That report also refers to the opinions of others, and says:—"Three very respectable gentlemen in each of the States of Pennsylvania, New-York and Ohio, say that one half of the wool will pay all the expense, where the winter requires five months' feed." It is evident from the language of that report, that the estimate, corroborated by the gentlemen from Pennsylvania, New-York and Ohio, is received as correct; and little weight, probably would be given to any estimate that should vary greatly from one made from so experienced and intelligent a wool-grower, as Mr. Randall. I certainly should not attempt it until I had given the subject a careful examination. I do not question the statement of the product of A.'s 100 ewes; their product of both wool and lambs, is less than many flocks of that number have produced. The profits of 100 ewes ought not to be taken as a test of the profits of sheep husbandry. We might as well take the product of one cow as evidence of the profits of a dairy; or 120 bushels of corn from an acre as a test of the profits of grain growing.

The flocks of sheep in this county range from 200 to 2000 or more. The average produce of wool per head in the whole state, does not exceed 2½ lbs.; and the average price per pound, for the last six years, has not been as high as thirty cents. I have the statement of



one wool purchaser, of the amount of wool he purchased in the years 1842,—'3 and '4; the average per year was 110,000 pounds, and the average price 31½ cents per pound; and this was in Washington county, New-York, which produces the best quality of wool. The income in flocks of 500, above losses, seldom goes as high as 25 per cent., many flocks not more than 10 per cent., and some no more than keep the flocks good. I hope none will engage in sheep husbandry with the expectation of receiving 27 per cent. on his capital invested. Farmers in general, are well satisfied if they receive 6 per cent. at the present low price of wool. Few farms will produce six per cent., over the expenses, on the cost of the farm. Some small pieces of meadow land may produce 12 or 25 per cent. on its cost. This subject ought to be investigated in reference to large farms, with buildings, woodland, &c. The fair way, and the one best calculated to present the question in a practical form, is first, to ascertain the true cash value of the amount of grass standing, that will be required to keep a certain amount of stock, and if this will sell for a sum that will be equal to six per cent. on the cost of the farm, the capital is considered in this section, to be a good investment. To change this into hay, and from hay and grass into wool, or butter and cheese, is a mechanical process; the profits arising from the operation, must vary according to the science, skill and economy used by the operator.

In this neighborhood, hay in the barn is worth \$6 per ton, and good, smooth meadow, that will produce one, or one and a-half tons per acre,—the grass standing—is worth \$4 per ton, and lands that produce one and a-half tons per acre, will be equal to six per cent. on the cost, at \$100 per acre. I estimate 20 tons of hay for the wintering of 100 good breeding ewes. The lowest estimate is 15 tons. The pasture to keep 100 ewes and their lambs through the season, cannot be obtained for less than \$36—ewes and lambs cannot be turned off until after shearing. If 33½ acres will keep 100 through the winter and summer, such lands must be worth here \$48, or allowing but 15 tons of hay to the 100 ewes. There are lands in this county that may produce that amount of hay and grass, that can be purchased for \$20 per acre; but they lie on the mountain, where the hay cannot be taken away without great expense. In passing through Cortland county, I saw no such lands. The difference in the result of Mr. Randall's calculation and mine, arises from the different value we put upon the lands. Taking the same number of acres and ewes, my estimate would be as follows:

A. buys 33½ acres of land, at \$48 per acre, ..	\$1600 00	
100 ewes, at \$2, ..	200 00	
Cutting and curing 11 acres of above land, ..	18 00	
Washing and shearing, ..	5 00	
Summer care and salt, ..	10 00	
Winter and spring care, ..	30 00	
Loss, ..	4 00	
		\$1867 00
Receipts—300 lbs. of wool, (the same as by		
Mr. Randall's estimate,) ..	\$118 71	
80 Lambs, at \$1, ..	80 00	
		\$198 71

If the owner let his land and sheep, the account would stand thus:

Interest on the money paid for land and sheep		
at 7 per cent., ..	\$126 00	
Other expenses as before, ..	67 00	
		\$193 00
Receipts as before, ..		198 71

By my estimation, sheep husbandry is good business. The owner of the land and stock, gets 7 per cent. interest on his capital; and the tenant gets \$5.71 over full pay for all his labor. I have omitted the credit for manure, as that must be returned to the land.

I will now take a farm in this county worth \$7,000, pleasantly located and conveniently situated for school and meeting, with good buildings, orchard, and wood-

lands. This farm will keep 500 sheep, two cows and a team to carry on the farm. The owner stocks the farm with sheep, hires all the work pertaining to the sheep, and lets the cows, team, orchard, &c., and receives one half the avails of them.

Interest on the \$7,000, at 6 per cent., ..	\$420 00	
500 sheep at \$1.25—\$6.25, ..	37 50	
Cutting and curing 80 tons of hay, ..	100 00	
Summer care and salt, ..	12 00	
Washing and shearing, ..	25 00	
Winter and spring care, ..	75 00	
		\$669 50
Deduct the receipts over the wool, ..	275 00	
		\$394 50
Receipts.—1375 lbs. of wool, at 33½ cts. per lb., ..	\$458 00	
25 per cent. increase, ..	125 00	
Receipt from plow land, &c., ..	150 00	
		\$733 00

Cost of producing 1,375 lbs. of wool, \$394, equal to 28½ cents per lb.

According to this estimate, the owner, by stocking his farm with sheep, has a larger income than by selling his hay, and by this process he keeps all the manure. This is a good dairy farm. Let it now be stocked with cows—500 sheep are equal to 50 cows. I do not believe that the income from cows managed wholly by hired help, would be as great as from sheep; everything pertaining to the management of a dairy requires extraordinary care. I will mention one fact to show what a little negligence may do to lessen the profits of a dairy. The dairyman had no cold stream of water to cool his milk and made use of ice,—the curd from the milk, when the ice was used, weighed 90 pounds. The next day after his ice failed, the curd from the same quantity of milk weighed but 70 pounds, of course inferior in quality. This loss must be equal to \$1 per day. Let this farm be stocked with cows, be let out to an experienced dairyman, and the whole receipts will be over \$2,000. I know some dairies where the income from the cows will average \$40 per cow, and others, not over \$17. The cost of producing a pound of cheese in one of these dairies, is double that of the other. Some of this difference may arise from a difference in the goodness of the feed of the cows. There are, as far as my knowledge extends, much greater improvements made in the management of dairies than of sheep. Let the same care, skill, and attention in the management of sheep as there are in dairies, and the profits of sheep husbandry would be increased 100 per cent. I have had considerable experience in both. I formerly kept a dairy and made it profitable. I keep from five to six cows now.

When I engaged in sheep husbandry, I had a fine flock of Merinos. For several years, I suffered great losses; I had neither sheds nor experience to make sheep profitable. It was the opinion of wool-growers at that day, that sheep must not be confined to warm sheds. It was no uncommon sight in the spring of the year, to see 200 or 300 lbs. of pulled wool, and from 60 to 80 dead lambs. These were heavy drawbacks upon the profits and pleasures of sheep husbandry. Wool then brought from 55 to 75 cents per lb. and was the only income, as the increase did no more than keep the flock good,—the average amount of wool per head was not over three pounds. I have now changed my whole management. I keep through the winter, from 300 to 350 sheep; from them I select generally 110 ewes, over two years old, for breeding—never breeding from a ewe that will not produce at two years old, over four pounds of well-washed wool. I breed from the best rams I can obtain. I keep my sheep closely confined from the time they are put to hay until they are turned out to grass. I have 200 at one barn one mile from my house, about one-half of them lambs;—these are fed on lowland hay, twice a day, without any grain of any description. They have access to good

water, and good Turk's Island or rock salt at all times. The flock kept at this barn has, for the last three years, been taken directly from the pasture to the barn, and there confined until they are turned out again to pasture. I commenced with hay on the 22nd, 23rd and 26th of November; turned to pasture the 6th, 9th and 13th of April—average time to hay being 19 weeks. Breeding ewes must be kept to hay at least two weeks longer. This year, this flock was confined on the 15th of November. There were three or four weeks of warm weather after this, during which sheep might have *lived* by grass. My breeding ewes, with the stock rams, are fed eight quarts of corn per day. I estimate 20 tons of hay, or what is equal to that, in hay and grain, for wintering 100 sheep. I keep an account of the sales of my wool and sheep, and will give the product of my sheep for the last three years, which is larger than any previous years', except one, and that was caused by the price of wool being very high that year.

Nov. 12, 1845, I had 309 sheep—Nov. 12, 1848, I had 319 sheep, being an increase of ten, and somewhat improved in quality.

I estimate the cost of keeping, the same as if I purchased the hay, and hired the pasture—calling the flock 300.

For 100 breeding ewes, 20 tons of hay, at \$6 per ton, . . .	\$120 00
For 200 other sheep, 30 tons, . . . . .	180 00
Pasture for 100 ewes and their lambs, . . . . .	36 00
Pasture for 200 sheep, . . . . .	40 00
Washing and shearing, . . . . .	15 00
Winter care, and salt for the year, . . . . .	20 00
	<hr/>
	\$411 00

Receipts.—Wool for the first year, 1846—1233 lbs., at 40 cents per lb., . . . . .	\$495 20
Clips of 1847—8 not sold, worth now, say, . . . . .	800 00
Sale of sheep, 1st year, . . . . .	380 00
do 2d year, . . . . .	509 00
do 3d year, . . . . .	416 00
	<hr/>
	\$2600 20

I have not included in the expense of keeping the sheep, the interest on the capital; that can be done by others. It must vary greatly in different locations; also, in the value of the sheep.

For the last ten years, I have not lost one per cent. of old sheep, nor over two per cent. of lambs. Of the flock of 200 kept in close confinement, I have lost but three during the three years past, and so far on the fourth year; one of these got hung in the rack, and the other two died with the stretches. Not one during the three years has scoured, or been in any way sickly.

In 1826, I had over 150 full blooded Merino ewes and 200 grade sheep, and 1100 pounds of wool was nearly the whole amount of the income that I received from them. The labor of taking care of them was twice as great then as now, and the cost of keeping them much greater. I am now convinced that a flock of 500 or more, can be made to produce as well as a smaller flock. The cost of producing a pound of wool must vary according to the amount of wool produced per head, for it costs no more to keep a sheep that will yield four pounds of wool, than one that yields but two pounds. This alone diminishes the cost of producing a pound of wool; and if the increase of the flock should be equal to 33 $\frac{1}{3}$  per cent., the cost is still more reduced. The cost of producing must decrease, as the flock increases.

A small portion only, of the farms in Vermont, are suitable for dairies. No lands in New England are more productive than the valleys of Battenkill and Otter creek. A large portion of the pasture lands are too remote from the buildings, and in many respects unfit for dairying. Yet they are productive; and though they are high, rocky side-hills, make the best of sheep pasture. There are some of 400 or 600 acres in a body, suitable for a farm, having a suitable portion of excellent meadow land, producing from half a ton to two tons of hay per acre. One of these farms, of about

500 acres, with a house and two barns, was purchased for \$2600. This farm will keep 40 or 50 cows, or 500 sheep—more than some farms that cost \$7000 will keep.

I know of one dairy of 20 cows that produces 10,000 pounds of cheese for sale, 300 pounds of cheese for the family, and 600 pounds of butter; this, with calves, whey and milk for hogs, will average over \$42 per cow. This dairy is managed by one man, his wife, and one young man and a girl. Another, with the same number of cows, and one-third more help, does not produce one-half of that amount. In the trial of a case in court, a short time since, it was proved that 100 pounds of dry hides had been so managed as to produce 160 pounds of good sole leather, and in one case, as high as 182; while another, with unskilful management, produced but 130 pounds, and it is said that leather, giving the most weight, is worth two cents more per lb. than the other. This difference is caused by knowing how to open the pores of the hide to receive the tan, and then, to use the words of the manufacturer, "pursue the same course that you would to fat a hog,—feed as much good feed as the hide will receive without clogging it." This principle will apply to any product of the farm. The more flesh you put on an animal you fat, or the more butter and cheese you make from the same quantity of milk, the more valuable is the article by the pound. In the case of the tanner, let the unskilful manager tan the same amount of hides that the other does, and the difference in the receipts from the leather, (on account of the greater number of pounds, and the increase in price,) would be more than \$6,000 per annum. The unskilful manager has one advantage over the other; it does not cost him half as much to transport his produce to market.

That is evidently the most profitable course of farming, that is managed best. A moment's reflection will satisfy any farmer of the folly of changing from one course of farming to another at every rise and fall of the prices. There seems to be a greater disposition in wool growers to jump out of the business at every fall in the price of wool, than in any other class of farmers. There is no reason for that. Beef, pork, butter, cheese, grain and wool, are articles of general consumption, and will, in a cycle of five years, command fair prices. Nor has wool fluctuated more, if as much, as most other articles. Flour has varied from \$12, to \$3.75; pork from \$23.13 to \$9.27; beef from \$14.98, to \$5.75; butter, cheese, cattle, and horses, as much. Let every wool grower follow the rules for breeding that are established for all other kinds of stock among good husbandmen; see that his sheep are provided with water and warm sheds, which may be done at little expense, and he will, in this cold, windy country, save much fodder; increase greatly both the quantity and quality of his manure; and by good attention to feeding, he may add 25 or 50 per cent., (just as he pleases) to the value of his wool, and the increase of his flock. But so long as sheep husbandmen manage their sheep, (and many do) as the French Canadians do their horses, permitting every thing to breed that has hoofs, whether they can chew the cud or not, they have no reason to look for any thing better than a flock of miserable *half woolled Keenucks*. If such a flock ever increases, the increase must be sold for 50 cents per head or less, for pelting; or the purchaser be permitted to select the best at 80 cents or \$1 per head.

With all the light we have on the subject of improvements, we must agree with those who say—"After all your talk about science in agriculture, these are not the men who make money and get rich." They may not be the men that get rich. They make money and spend whatever may be necessary for their comfort and the improvement of their minds. A 6 by 8 country newspa-



per would cloy the literary appetite of these no improvement farmers, and a pistareen would generally cover all their subscriptions for pious and charitable purposes. Such wool-growers had rather pick a dead sheep than pay out a York six-pence for improvements in breeding animals or sheds.

Now after all this long talk, I must confess my utter inability to answer either of the questions at the head of this article, in a manner to satisfy even my own mind. I therefore leave it to others, to decide which is the most profitable course of farming, and make their own estimate of the cost of the articles they produce; being convinced they will feel justified or condemned, according to the greater or less amount of income produced from the capital employed. J. S. PETTIBONE. *Manchester, Vt., Jan. 16, 1849.*

## The Poultry Yard.

### Varieties of the Domestic Fowl.

**THE DORKING FOWL.**—This breed takes its name from having been formerly bred chiefly in the neighborhood of Dorking, a town in Surrey, England. They were originally distinguished as having five toes to each foot, and as being of a white color. Their origin is not positively known. Some have supposed the breed to be of great antiquity, and in support of this hypothesis, have referred to the fact that five-toed fowls existed anciently in Greece, as noticed by Aristotle, and that Pliny and Columella spoke of similar fowls being known in Italy in their day. But we do not see that there is the least evidence that those fowls were Dorkings; or that the Dorkings have descended from them. Certainly, the circumstance of both having a supernumerary toe, is of itself no proof of affinity of blood. It is by no means, a peculiarity confined to the Dorkings; the writer has in several instances seen it in the Polish, and in the Bantam breeds. There is no doubt that it is a mere freak of nature, similar to the production of an extra finger or toe in some families of the human race.

Arthur Young, in his *Survey of Sussex*, written in 1813, says—"The Dorking Fowls, as they are called, are reared in the weald of Sussex, but the finest market for them is Horsham. The five-clawed breed have been considered as the best sort; this, however is a great mistake, and it took its origin in some fowls with this peculiarity, that happened to be very large and fine, which laid the foundation of what has since been called the Dorking or five-clawed fowl. \*\*\* It is a bastard breed."

Dickson, in his treatise on poultry, says of the Dorking—"It is very probable that this large breed is a cross between the Malay, or shack-back [shake-bag,] and the game variety." The same idea is advanced by a writer in the *Scottish Quarterly Journal of Agriculture*, vol. VI. p. 381. Others have supposed the breed originated by a cross of the Malay and Poland, or Hamburgh fowl.

Martin objects to the idea that the Dorking fowl is of Roman lineage, and observes that if it was of ancient introduction, it is surprising it should, until lately, have been so isolated in its locality. He alludes to the fact that five-toed fowls are found in Germany.

But though the Dorking was formerly represented as a five-toed variety, and as being uniformly of a white color, many of the best known under that name of late years, have had only the customary number of toes, and have been of various colors. In fact it is stated by Martin, whose work was published in 1848, that those of a white color are now seldom seen." He adds—"During a recent visit of some weeks to Dorking,

though we visited the market regularly, and explored the country round, on one or two occasions only did we meet with pure white birds. In all, however, more or less white prevailed; but the cloudings and markings of the plumage were unlimited. Many were, as we observed, marked with bands or bars of ashy gray, running into each other at their paler margins." Those which he saw, had the five claws; but Dickson and several other writers state that many have only the ordinary number. Such is also the case with many we have seen that were bred from imported stock.

In size, the Dorking ranks next to the Malay tribe. It is short-legged, and large-bodied, and readily accumulates flesh, which is of good quality. The hens are good layers. The breed has been introduced from Eng-



41—BOLTON GREY, OR CREOLE FOWLS

land, and has been bred in this country for several years. They have succeeded well in many instances, though we think they are generally more subject to disease when young, and have less hardness of constitution, than some other varieties.

The Sussex fowls, which are said to be more or less crossed with the Dorking, are considered some of the finest in England. They are described as longer in the body than the Dorking, and as equalling them in weight.

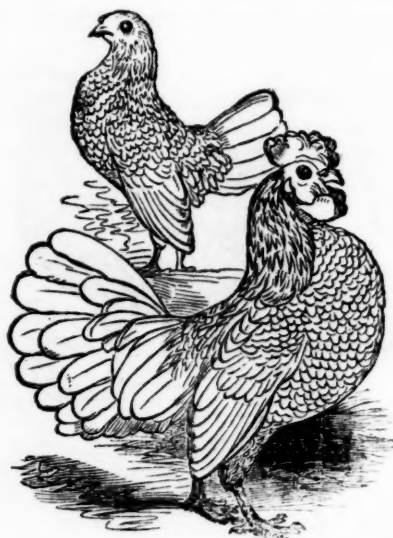
**THE BOLTON GREY, OR CREOLE FOWL.**—This is a very handsome variety, the origin of which we are unable to trace. The writer first saw it upwards of thirty years ago, under the name of the "Leghorn breed." In size, the Creoles are rather less than the ordinary game fowl. Their bodies are round and plump; legs short, sometimes yellow, occasionally lead-colored; heads small, finely turned, and generally surmounted with rose combs. The best of the variety have the neck-feathers pure white, those of the body white, with small black spots, sometimes running into a grizzle; the tail-feathers darker, with transverse black bars. The tails of the hens are unusually elevated, and are spread out, like a fan, during the laying season. They are chiefly esteemed as layers. It is one of the most ornamental varieties we know.

**THE BANTAM FOWL.**—The origin of this variety, as we have shown from Martin, (see current vol. pp. 18, 19,) is the Bankiva jungle-fowl; and it received its name from having been brought from a district or town in Java, called Bantam.

These fowls are the least in size of all the gallinaceous tribe. There are several varieties. Some have the legs plumed with long feathers, down to the toes; but the clean-legged varieties are usually most esteemed. There is a very handsome variety which is often red, with a black breast. But the most celebrated breed, is that known as Sir John Sebright's (fig. 42,)

it having been brought to great perfection by that gentleman, after years of care and attention. It is thus described by Martin:

"It is very small, with unfeathered legs, and a rose comb and short hackles. The plumage is gold or silver spangled, every feather being of a golden orange, with a glossy jet black margin; the cocks have the tail folded like that of a hen, without the usual recurved drooping sickle feather, or rather these feathers are abbreviated, straight or nearly so, and broader than usual. Hence the term *hen-cocks* often applied to them. But although the sickle feathers are thus modified, no bird possesses higher courage, or a more gallant carriage. The attitude of the



42—SIR JOHN SEBRIGHT'S SILVER BANTAMS.

cock is indeed singularly proud, and we have often seen one of them bear himself so haughtily, that his head, thrown back as if in disdain, has nearly touched the two upper feathers of his tail. Half-bred birds of this kind are not uncommon, but birds of the pure breed are not to be obtained without trouble and expense; indeed, some years ago, it was almost impossible to procure either a fowl or an egg."

Bantams are, of course, kept chiefly as a curiosity—they are *fancy fowls*. The hens are good layers, and the eggs are of delicate flavor. The flesh is also fine in the grain, and of superior quality; but they are too small to be saleable in the market.

In addition to the varieties of fowls above enumerated, there are some others which deserve a passing notice. Among these may be mentioned the following:

**THE PERSIAN OR RUMPLESS FOWL.**—This breed is chiefly remarkable on account of its being destitute of a tail. It is supposed to have been brought originally from Persia. We are not aware that the breed possesses any particular valuable quality. It is not uncommon in this country.

**THE FRIZZLED OR FRIESLAND FOWL.**—According to Martin, this breed is originally from Eastern Asia, and is often seen in Java, Summatra, and in India. It is occasionally met with in America, but is not common. It is a mere variety, and not a distinct species, as some have supposed. It takes the name of *frizzled* from the feathers—with the exception of those of the tail—being turned or curled towards the head, giving the fowl the appearance, as has been facetiously remarked, of having been "drawn backwards through a brush-heap." They are tender—the feathers do not afford protection against wet, and they are unable to bear exposure.

**THE SILKY FOWL.**—This is another accidental variety, which Temminck described as a distinct species under the name of *Gallus lanatus*. We have known several instances of fowls of this description having sprung from those of the ordinary character. They are

more difficult to raise than common fowls, owing to their destitution of feathers.

**THE RUSSIAN FOWL.**—This appears to be only a variety of the crested fowl, differing but little from the Polish and Hamburg breeds, excepting that it has, in addition to a large top-knot, long feathers, like a beard, springing from the under side of the throat.

The terms "**BARN DOOR FOWL**," and "**DUNGHILL FOWL**," are applied to all fowls which are of no particular variety, and in regard to the breeding of which no particular attention is paid.

We will remark in conclusion that, though we do not think it advisable that every person who keeps fowls should become a professed *fancier*, yet we think with Martin, that "more systematic care should be paid by the farmer than is generally done, that less should be left to chance, and some discrimination exercised in the choice of stock. We do not claim for the fowl a weight in the scale of importance equal to that of the ox, sheep or hog; at the same time we contend that the importance of poultry is greater than at first sight might appear; consequently, that all attempts to establish good breeds, at once hardy, white fleshed, quick fatteners, and abundant layers, are meritorious; nor indeed are the labors of the professed fowl-fancier to be regarded as useless. Were it not for his labors and care, the continuance of no breed, it is to be feared, would be effected. There would be no stocks to which to apply, by way of correcting the degeneracy of any race."

### Value of Bones as a Fertilizer.

**EDS. CULTIVATOR.**—In the slight measure of agricultural reading which it has been my good fortune to enjoy, I have frequently been surprised to find, there were those who, to judge by their writings, were in doubt respecting the great value of bones as a manure. With us, their exceeding great value has long since passed to a proverb. Our most stubborn farmers,—those who have been the most wedded to their old notions, and the most opposed to all *new things*,—have ceased from doubting, and not only admit their fertilizing properties, but use them freely; but, as I said before, there appears to be some who are yet skeptical, and who can not realize the important fact, that these apparently indestructible matters contain properties of the most fertilizing character. For their benefit then, with your permission, I will use the columns of your valuable journal, to lay before your readers, some facts which have come under my observation, and which have not only convinced me, but likewise all those who have been familiar with them.

Some twenty or twenty-five years since, on the banks of this beautiful stream, from the banks of which I am now writing, and the name of which I have assumed as my agricultural *nom de guerre*, there existed a farm, which, as has been but too frequently the case, was worn and exhausted to a degree that those who see it now, for the first time, would scarcely credit. It would not convey an accurate idea of its sterility, were I to say, it had been exhausted by excessive cropping, for that would only imply that the prolific property of the soil had been spent; but in this instance, not only had that been the case, in the fullest sense of the word, but the soil itself had been washed from its whole surface. It was almost surrounded by the waters of this stream, and being light and loamy, it had been washed into chasms and gullies in every conceivable manner. I can even now remember, when a boy, looking with compassion, upon its poor, miserable and forlorn appearance.

At about the period I have mentioned, it was purchased by Mr. W., a bone grinder, of Philadelphia.



--He employed an Englishman to farm it for him. I mention this matter, because at that time it would have been doubtful whether any of "our *free* and intelligent fellow citizens," could have been induced to stoop so low as to cart dry bones; but be that as it may, the course pursued by these persons—landlord and tenant—was to haul on bones of all kinds, principally however, ground bones and knuckle joints. I am sorry I cannot give you the quantity they put to the acre; but as I only wish to convince the skeptical, that there is virtue even in dry bones, it is not of so much importance. Suffice it then to say they were put on liberally.

When it was purchased by Mr. W., it would have been impossible for any person to have made a respectable living from it, even had it been given to them free of rent; but when he sold it, some ten years afterwards, it was decidedly one of the most productive farms in the neighborhood. From having been so poor that no other grass than red clover would grow on it, and not over ten bushels of corn could be produced to the acre, it was, in the short space of time mentioned, so much improved in fertility, that from one and a-half to two tons of timothy hay, or fifty or sixty bushels of corn could be raised to the acre, one season with another. After it passed from the possession of Mr. W., it went through the hands of various persons, either as owners or tenants, every one of whom pursued the skinning process. It was cropped and re-cropped, much hauled off and but little hauled on, and farmed without any regard to maintaining its fertility; but notwithstanding all this, it still, after fifteen years of constant skinning, maintains the character of being a most productive and valuable farm.

After Mr. W. sold this, he purchased another just as poor as the one mentioned; with this difference however, the latter one was level, cold and clayey. He pursued the same course with the latter that he had heretofore done with the former;—and the result was precisely the same. After a few years cultivation, in this manner, the improvement was so apparent, and his crops were so luxuriant, that our old-fashioned, plodding farmers were compelled to admit, that, in this instance at least, bones had proved a most powerful fertilizer.

I might here rest my case and claim a verdict in my favor; but I have, in my mind's eye, one more which is perhaps as conclusive as either of the others.

Some fifteen years since, a gentleman purchased a farm very much of the character of those mentioned above. He was desirous of having it brought to a higher degree of fertility. To do this, he began to haul manure from the city of Philadelphia, a distance of some ten miles; but he found the cost, wear and tear, and destruction of horse flesh, were more than he bargained for, and accordingly he soon abandoned it. Just at that time, he engaged the scraps from a button factory—these are the pieces of bone after the button has been sawed out—he spread them on his land at the rate, I think, of seventy or eighty bushels per acre; and now there are few farms more productive than his, made so almost solely by the use of this manure.

I might go on for a week, instancing cases wherein this same result has followed the same course, just as invariably as the sun traces its course through the heavens; but it would exhaust your patience; nevertheless, at the risk of doing so, I cannot refrain from giving you my own experience in the matter.

Four years since, I put in some wheat, part with thirty bushels of ground bones to the acre, which cost some ten dollars; and along side of it another piece, with stable manure, at a cost of fifteen dollars per acre, at city prices. At harvest, that part manured with stable manure was much the best, fully equal to the difference in the cost. The year following, both parts were

in grass—the following year in corn, and after that in oats, in all which crops, that part manured with bones was decidedly the best; the crops on it were fully one-third greater.

The following season I put in three pieces of wheat, one with about twenty loads of barn yard manure, one with fifty bushels of poudrette, and the last with fifty bushels of ground bones to the acre. At harvest, the part manured with poudrette was the best; the part manured with yard manure the second best; and the part with bones almost an entire failure. That season the fly was bad, and this part having a late start, was harvested by them so completely that I did not get back my seed; but I made it all up the last season with grass; for the product of that part on which bones had been put, although before the poorest part of the field, was greater than that of either the others.

The following season I pursued the experiment still further. In putting in wheat, I selected two lots of an acre each, lying side by side, of precisely the same kind of soil, formed from the disintegration of mica and quartz. On one I put twenty loads, two horse wagon loads, of barn-yard manure which had been housed from the rains, and had been well tramped by the cattle; on the other, fifty bushels of the refuse bones from an ivory black factory, consisting of those parts of the animal frame which were not firm enough for the manufacturer's purpose, and mixed with some portion of boiled animal muscle, the whole costing about ten dollars per acre. The result of this experiment was, that where the yard manure had been put, the wheat, in the early part of the season was much the best, and remained the best at harvest, although by that time, the difference was not so perceptible; but when, last season, it was mown, the difference was greatly in favor of the bones. The product was so much greater, that skepticism itself could not raise a doubt.

I have been sorry a hundred times since, that an accurate measure of the products of the various trials was not taken; but as they were undertaken merely for my own satisfaction, and with no thought of publication, it was passed over as not worth the trouble.

Whether the facts warranted above are such as to convince any one of the unequalled value of this manure, both as to its economy and lasting properties, is for others to determine; but if they should not do so, my advice would be, to any practical farmer who doubts, to try from ten to fifteen dollars' worth to an acre upon his wheat crop, spread broadcast and harrowed in; and if that does not convince him, he must indeed be hard to satisfy. PENNEPACK. *Lower Dublin, Pa., Feb. '49.*

## The Veterinary Department.

### Stretches and Scours in Sheep.

EDS. CULTIVATOR—Your correspondent, R. G., of Jefferson county, Ohio, wishes some information in reference to the cure of scours and stretches. I would inform him that the first indication in the cure of disease, is, to remove the predisposing, or direct cause.

"The disease was, perhaps, in the first place, induced by feeding on green frosted oats, and clover, late in the fall." Then I would advise Mr. R. G., and every other farmer, not to suffer their animals to feed on such indigestible materials again, or any other article of the same nature.

"As to stretches," your correspondent states "that it is most troublesome and fatal, amongst those flocks closely yarded, and fed exclusively on dry feed." It would be something very remarkable if the flock did not manifest some signs of stretches, constriction, or constipation; let any one of the human family confine

himself to a narrow atmosphere, and subsist on hard ship-bread for a short time; obstinate constipation will in nine cases out of ten, supervene. Medicine has but little power over such derangements, while the exciting or direct cause exists. This will, in some measure, account for the unfavorable result, attending the administration of Mr. Morrell's prescriptions.

"I have always found that the quantity of medicine necessary to act as an opiate on this dry mass," alluding to that found in the maniplus, "will kill the animal. If I am mistaken, I will take it kindly to be set right." You are quite right.

Let us see what Professor J. A. Gallup says, in his *Institutes of Medicine*. Vol. II. p. 187. "The practice of giving opiates to mitigate pain, &c., is greatly to be deprecated; it is not only unjustifiable, but should be esteemed unpardonable. It is probable that for forty years past, opium and its preparations have done *seven times the injury* that they have rendered benefit"—killed seven where they have saved one! Page 298, he calls opium the "most destructive of all narcotics," and wishes he could speak through a lengthened trumpet, that he might tingle the ears" of those who use and prescribe it. All the opiates used by the Allopaths, contain more or less of this poisonous drug. Opiates given with view of softening the mass alluded to, will certainly disappoint those who administer them; for, under the use of such "palliatives," the digestive powers fail, and a general state of feebleness, and inactivity ensues, which exhausts the vital energies.

It will be found in stretches, that other organs, as well as the "maniplus," are not performing their part in the business of physiological or healthy action, and they must be excited to perform their work; for example, if the food remains in either of the stomachs, in the form of a hard mass, then the surface of the body is evaporating too much moisture from the general system; the skin should be better toned. Pure air is one of the best, and most valuable of nature's tonics. Let the flock have pure air to breathe, and sufficient room to use their limbs, with proper diet, and there will be little occasion for medicine.

In scours, the surface evaporates too little of the moisture, and should be relaxed by diffusible stimulants in the form of ginger-tea. The treatment that I have found the most successful, is as follows: take four ounces raw linseed oil—two ounces of lime water—mix. Let this quantity be given to a sheep on the first appearance of the above disease; half the quantity will suffice for a lamb. Give about a wine glass full of ginger-tea at intervals of four hours. Let the animal be fed on gruel, or mashes of ground meal. If the above treatment fails to arrest the disease, add half a teaspoon-full of powdered bayberry bark to each wine glass of tea. If the extremities are cold, rub them with the tincture of capsicum.

"The feeding of pine boughs, we have formerly practiced and think to be useful." Eds. of *Cultivator*. Pine has a revulsive action on the skin, is stimulant and diuretic, and if used occasionally might be the means of preventing many forms of disease in animals. GEO. H. DADD. *Boston, Feb., 1849.*

#### Diseases of Cattle.

**ABORTION IN COWS.**—The cow is more subject to abortion than any other of our domestic animals. She is liable to this at different periods of pregnancy, from the fourth to the eighth month. Mr. Youatt remarks, what has been often observed by others, that "abortion is sometimes singularly frequent in particular districts, or on particular farms. It seems to assume an epizootic or epidemic form. Some have imagined it to be contagious. It is destructively propagated among the cows, but this is probably to be explained on a different prin-

ciple from that of contagion. It has been said that the cow is an animal considerably imaginative, and highly irritable during the period of pregnancy. In abortion, the fœtus is often putrid before it is discharged; and the placenta or after-birth rarely or never immediately follows it, but becomes decomposed, and as it drops away in fragments, and emits a peculiar and most noisome smell. This smell seems to be singularly annoying to other cows—they sniff at it, and then run bellowing about. Some sympathetic influence is produced on their uterine organs, and in a few days a greater or less number of those that have been kept together likewise abort."

In regard to treatment of abortion, Mr. Youatt directs, that if the farmer has ever been troubled with this pest, he should closely watch the approaching symptoms of casting the calf, and as soon as he perceives them should remove the cow to an apartment by herself. That he should bleed her, and that copiously, in proportion to her age, size, condition, and the state of excitement she is in; that he should give her a dose of physic immediately after the bleeding; after the physic begins to operate, he should administer half a drachm of opium and half an ounce of sweet spirit of nitre. Give the cow gruel, and keep her as quiet as possible. By these means, the irritation may be allayed and the cow may go her full time. But if the discharge is fœtid, "the natural conclusion will be, that the fœtus is dead, and must be got rid of as speedily as possible. Bleeding may even then be requisite, if much fever exists. In other respects, the animal must be treated as if her usual time of pregnancy had been accomplished." He further directs as a means of *preventing* the formation of this habit among cows, that as soon as the fœtus can be got rid of, it should be immediately buried deep, and far from the cow-pasture. A cow that has repeatedly aborted, should be fattened and slaughtered.

### The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

#### Short Seasonable Hints.

**TENDER SHRUBS, grapes, strawberries, &c.,** covered late last autumn from frost, should be uncovered early, before injury may have taken place by close packing and confinement, which is always greater after a winter's settling.

**Small banks or mounds of earth,** which may have been thrown around trees to protect them from mice, should be levelled down at an early period.

**ORCHARD CATERPILLARS** should be thoroughly cleared from the trees before or at the time of hatching. A little practice quickly enables any one to perceive the little knobs of eggs near the ends of the twigs, to cut them off and burn them. Every one of these little knobs is an embryo nest of caterpillars. They hatch simultaneously with the opening of the buds; and if not before removed, the white spiderweb down which the young worms thickly wind about their nest, even in the short space of a day or two, greatly facilitates their ready detection. It may be very readily comprehended how much easier it is to rid a branch of a nest when only the hundredth of an ounce in weight, than after the size has increased to two or three pounds.

**RASPBERRIES** need early pruning. Clear away the old stems, and leave only half a dozen of the strongest of the new. Their upper extremities are to be shortened a foot or two, and the remaining stems, if not of a stiff and upright variety, to be tied to a stake.

**TREES IN BUD,** or which were budded last summer, should be headed down, leaving the inserted bud alone



to grow. But if cut too closely, the stump of the stock will be some partially dry down below the place of the bud, and endanger its growth; hence two or three inches must be left until some inches of growth are made, and to this stump the young shoot is tied to straighten the tree. The stump may be cut closely about mid-summer or sooner.

**YOUNG TREES**, lacking vigor of growth, may be matured by spreading compost or yard manure over the surface for some feet from the tree, and spading it in. For the peach, pear, and apple, the application of ashes, (if leached, they are highly valuable,) and lime, is usually found of eminent service.

**PREPARING FOR TRANSPLANTING**, should be done in the most thorough manner. Large holes, six or seven feet in diameter, and a foot and a-half deep, filled with rich mould, will be found cheaper for most kinds, than holes just large enough to crowd the roots in with some difficulty. A still better way is, to subsoil and trench-plow for one year previously, either the whole surface, or a strip ten feet wide where the row of trees is to stand, thoroughly mixing in manure, muck, and ashes, in compost, by the process of plowing and tillage. Now, does any one start up in alarm, at the cost of this preparation? As well might he become frightened at the expense of setting out his trees at all,—and indeed with a great deal more propriety, at the hasty and superficial style; for fifty apple trees, thoroughly set out at a cost equal to the price of fifty more, will yield in ten years, more than twice the amount of fruit to be obtained from the full hundred without care or preparation, to say nothing of the superior quality.

#### Pruning connected with Transplanting.

Every cultivator must have noticed the great difference between the vigor of growth, and the power of producing new shoots, possessed by those more southern species, the peach and the grape, than those of more northern origin, as the apple and cherry. Hence the greater necessity of pruning the peach and grape, to improve the quality of the crop, and prevent a redundancy of wood and leaves.

This reproducing power enables the cultivator to secure an important advantage in transplanting. The shoots of a grape-vine, when set out, may be cut back to two or three buds, and it will quickly throw out a new growth. The peach will do the same. It hence becomes far safer in removal to lessen the number of buds, until a corresponding growth of the root will support a heavy amount of foliage. This also explains the reason why peach trees may be set out *in the bud*, (that is, before the inserted bud has started,) with such great safety, and without diminishing the growth for the first, nor any subsequent year.

So important is the shortening back of the shoots of young peach trees when transplanted, so as to reduce to a-half or a-quarter, the number of buds, that we have had as good success in setting out trees three or four years from the bud, with this shortening, as in others only one year old, without it.

#### The Peach Crop.

Through a large portion of Western New-York, most of the peach crop has been destroyed by the severe cold of the late winter, the thermometer having sunk several degrees below zero. In favorable localities, a part of the fruit buds have escaped. Where the thermometer sunk to 10° or 12° below zero, nearly the whole have suffered. The fruit buds are capable of enduring a much lower degree of cold, if they have not been in the least degree swollen by previous warm weather; but it usually happens that a few mild days late in au-

turn or during winter, throw into them moisture enough to render them liable to destruction. The remarkably mild weather, at the commencement of the past winter, will be recollected by all, and it was observed with apprehension by those who knew the dangerous position in which it was placing the peach crop.

#### Large and Small Fruit.

The value which is placed on large size alone, has contributed in a great degree, to introduce poor fruits into cultivation. Where would have been the Monstrous Pippin or the Gloria Mundi (glory of the world) if it had been no larger than the Ross Nonpareil or Bullock's Pippin? Such "heavy orbs" as the Alexander, the Twenty Ounce, and Pound Sweeting, although not to be compared in quality to many others, have been suffered to eclipse them, until cultivators had their sight thoroughly satiated by gazing at the monsters, and the palate remained yet to be consulted.

There is less excuse for retaining such large sorts, because beyond a certain size for an apple, weight becomes an evil, by adding to the liability to bruise. For this reason, it is not desirable to have larger than the Gravenstein, Swaar, and Esopus Spitzenburgh, when well grown. Much smaller sorts, on the other hand, although they may be of high flavor, are less convenient in gathering, and have hardly space enough for a good mass of pulp between the skin and the core. Hence the value of Bullock's Pippin, and English Golden Pippin become greatly diminished; and even the Pomme Grise and English Russet, are less prized for falling a little below the standard of magnitude. Early apples, softer and more easily bruised, may be less in size than keepers; for which reason, the small figure of the Early Joe and Garden Royal should not be regarded as so serious an objection as with winter fruit.

With small fruits, as the cherry and strawberry, it is more important to secure large size. If it requires as much time to pick a peck of one of these, as a cartload of apples and peaches, doubling the bulk becomes a point of great convenience.

We have often thought that a classification of a few prominent varieties, according to their leading qualities of recommendation, would be interesting as well as useful:—

*Fruits remarkable CHIEFLY for large size:*—Monstrous Pippin, Pound Sweeting, Alexander and Kentish Filbasket apples; Belle et Bonne, Colmar d'Aremberg, Dunmore, and Cumberland pears; the Yellow Egg, Diamond, and Duane's Purple plums; and Methven and Wilmot's Superb strawberries.

*For remarkable beauty alone:*—Cranberry Pippin and Beauty of Kent apples; and Belle de Bruxelles, Columbia, Summer Belle, Jalousie and Forelle pears.

*For fine flavor, but deficient in size:*—Early Joe, Ross Nonpareil, Bullock's Pippin, (when well ripened,) Garden Royal, Golden Pippin, and Sam Young apples; Seckel, Eyewood, and Rostiezer pears; Green Gage and Frost Gage plums; and Duke of Kent strawberry.

*Fruits of good quality, whose reputation has been assisted by fine or handsome appearance:*—Dutch Mignonne, Red Astrachan, Williams' Favorite, Maiden's Blush, St. Lawrence, and Lady apples; Golden Bilboa, Bartlett, and Vicar of Winkfield pears; Coolidge's Favorite and Crawford's Early peaches; Washington and Cruger's Scarlet plums; Napoleon Bigarreau and Graffion cherries; and Hovey's Seedling strawberry.

*Cherries arranged in order of their size:*—Napoleon Bigarreau, Black Tartarian (when not overloaded,) Graffion or Biggareau, Large White Bigarreau, Holland Bigarreau, Knight's Early Black and Belle Magnifique, Large English Morello, Black Eagle, Carna-

tion, Florence, Elkhorn, Early Purple, Guigne and American Heart, Sparhawk's Honey, Gridley and Belle de Choisey, Downer and Madison Bigarreau, and May Bigarreau.

#### Pruning Young Apples—the Baldwin Apple.

EDS. CULTIVATOR—Mr. Downing seems to think that our powerful sun reaches every part of the tree, and renders the minute system of pruning and training, which occupy so large a portion of the English works on this subject, of little or no moment to the cultivator here. I have been engaged in raising engrafted fruit about twenty years, and my impression is, that strict and minute attention should be given in the formation of the young apple tree. I have found that where the tree was suffered to take its own course, that in a great many instances, when it comes to bearing, the tree will be badly balanced, and some limbs having a greater amount of fruit than others, come in contact. When this is the case, the fruit on the younger limbs will not mature well. The best method of forming a tree that has ever been suggested to my mind, is at about seven feet from the ground, to trim all the limbs off but four, and them to be left in opposite directions—say to correspond with the different points of the compass. Passing up the main shaft of the young tree, about four ft. above the first tier of limbs, you should then leave four more young limbs, immediately over the spaces of the under tier of limbs. You can extend the same course as much higher as may be thought expedient. A tree pruned in the above described way, let it be ever so heavily laden with fruit, will not break in any part; besides, if one limb has more fruit on it than the others, when bowed down, it will not come in contact with limbs on the lower tier, because there is none immediately under it. When a tree is formed as above described, the fruit throughout the whole tree will be of an uniform size, and will mature better than when managed in any other way.

It is supposed by some that the Baldwin apple does not do as well south of New England, as it does there. I have had trees of that description in bearing for about fifteen years, in the vicinity of Wheeling, Va., which is in latitude 40° 10'. The Baldwin apple in New England I only know by reputation; therefore do not know how it ripens and keeps, when compared with other keeping fruit. My Baldwin apples are fit for barreling from ten to fourteen days sooner than any of my other fruit, and I have a goodly variety. If they are picked and barreled with care, and laid in some cool place, they will keep tolerably well until the last of February. They are very palatable and even delicious, and particularly so when we speak of them as a cooking apple. N. P. A. *Etna, O.*, 1849.

#### Raising Peach Trees.

EDS. CULTIVATOR—I have been very successful in raising peach trees in a nursery, and the following has been the method practiced: I always procure pits of the common late variety, and none others, which are kept dry until about the first of March, when they are then soaked in barrels of water until the seeds are perfectly swelled with the moisture. The pits are then placed in layers on the surface of the ground, and covered with soil, where they are exposed to the frost until about the first of April, when they are taken out and carefully cracked by hand, and as fast as the seeds are taken out, they are thrown into a dish of water, which breaks the fall and prevents injury to the germ. The seeds should not remain too long in the water, as they are liable to be injured by an excess. The next process is to put them in a situation to germinate; and I have found a preparation of leaf mould and fine

yellow loam sifted, much the best for the purpose; as the seeds are not liable to be injured in their removal, after they are sprouted, the preparation should be placed in a situation where the sun shines most during the day, with the peach seeds mixed through it. The dark color of the leaf mould attracts the heat of the sun, and soon causes the seeds to germinate. The next process is the planting, which is a very important part.\* After the ground is plowed and leveled, a line is stretched where the first row is intended to be planted. The line is spaced off at six to eight inches, and permanently marked, and a seed is to be planted opposite to each mark which makes great regularity in the growth of the trees, all having an equal chance. In putting the seeds in the ground, I use a common transplanting trowel to dig the hole for the seed, which is made about one inch deep. The root and seed is placed carefully on the side, and covered with moist and mellow soil. If the earth is very dry, it should be watered over each seed, to insure complete success. If any fail to grow, they can be made good by setting in plants of peach trees 2 or 3 inches high. The latter operation should not be put off too long, as peach trees will not grow well if transplanted after the roots turn red. After the trees are about three inches high, they should have the ground well loosened around them, and the surface between the rows well stirred with the cultivator. The trees need be hoed but twice during the first season. I always make it a practice to use the cultivator after every rain which occurs during the growing season, while the trees remain in the nursery. The rows should be made three and a-half feet distant from each other.

There is one other notion connected with the operation of growing peach trees. If seeds of the top onion are planted in the space between the trees, a crop of excellent onions may be grown, without being at all detrimental to the growth of the trees, and the quantity will at least pay one-half the expense of raising the nursery. The onions which I have raised in this manner, were of fair size, and the fact of their being shaded by the trees during the hot weather, prevented their becoming so outrageous strong as they generally are, when exposed to the full heat of the sun during the summer. The great *ultima thule* of growing peach trees, whether in the nursery or orchard, consists in stirring the ground often, especially after every rain which falls through the growing season; and this fact should be impressed upon the mind of every person who expects to realise his wishes in this matter. A regular system of operation should be adopted, and carried out; and is actually of as much or more importance than is necessary to their growth and welfare, (i. e.) the warmth of the sun, vegetable matter, air, &c. I have often noticed the sad effects of plowing or summer fallowing ground occupied by peach trees. Such an operation is almost sure destruction to them, from the fact of the fibrous roots being destroyed at a time when they are of the greatest importance for the nourishment of the tree; (the same will apply to the apple orchard.) My young peach trees are always fit to bud in August; and if it is done early, an opportunity is afforded to re-bud any trees where the bud fails in the first trial. I cut or head down my inoculated trees about the last of March, and if I find any trees whose buds failed to grow, I immediately dig them out and throw them away, as of no importance, for I consider it better to raise anew, than to bother with old, as they obstruct the free growth of buds around them, being of better constitution than most of the improved kinds. ISAAC HILDRETH. *Yates Co., N. Y.*

\* When the seeds are taken out for final planting after being sprouted, they should be covered with a wet cloth to prevent the gum from drying in the sun or wind.



### Pruning Young Pear Trees

I have a number of pear trees from grafts inserted last spring, which have made from 3 to 4½ ft. of wood the past season; consequently they are so slender they will not support themselves without staking. Should they be headed back in the spring, so as to ensure a more stocky growth, or shall I continue to stake them until the trees are sufficient to support themselves? The trees are of the *Beurre Bosc* variety. W. DOOLITTLE. *Borodino, Onondaga Co., N. Y.*

It would doubtless be best to stake the trees in the first place. Cutting them back half way down, would make crooked stems, and cutting down wholly, would only cause a repetition of the same difficulty another season. If they throw out side shoots, nip off the ends after they have grown some inches. This course will soon render the tree stiff. But in any case, the tree will become better able to support itself as it grows older, provided the stem is not kept closely trimmed up, which enlarges the top faster than the tree has strength to support it, the result of a very common error of the inexperienced. It is better to lessen the top, and suffer side shoots to remain one year, which will give the stem a gradual taper upwards, so essential to strength, instead of the long and uniformly slender form from repeated close trimming.

### To Prevent the Ravages of the Cut Worm.

EDS. CULTIVATOR—Most gardeners have experienced a great deal of vexation from the destruction of their plants by the cut worm. The cabbage plant appears to be in special favor with these destructives. They are much more abundant I think in southern gardens than at the north, and in many gardens, the plat devoted to cabbages has to be often almost entirely replanted. There is a simple and efficient preventive which requires only to be known to be universally practiced when necessary.

On the site of your intended row of plants dig a narrow trench three or four inches deep, and in the bottom of this trench set your plants as usual, and the cut worm will not go into the trench to injure the plants. The experiment was fully tested the past summer by the writer, and proved perfectly satisfactory. When the plants have become a little stout and able to resist the enemy, the earth must be gradually gathered about them until the whole plat once more becomes a level. The plants will head with this mode of culture quite as well as by any other. I have left about half of the plat at times, to be set in the old mode, and from one-fourth to two-thirds of the plants have been destroyed, while not one in the trenches has been injured in the least. I had but little faith in the plan when first pointed out to me, but repeated experiments have satisfied me that it is an efficient one. I don't pretend to give the reason of the thing, though I am convinced of its efficacy. WM. N. WHITE. *Athens, Geo.*

### Destruction of Fruit Buds by Frost.

The buds of the Peach and other tender fruit trees throughout this section of country, were all destroyed by the cold weather of the winter of 1847—8, so that in this section of country there was hardly a peach to be seen. I have about thirty thrifty trees of the above variety, from three to six years old, and last fall I did not have a single peach. On examination, I find there is a clean sweep made of them this winter also, as I cannot discover a living bud on any of them. The Nectarine and Apricot have suffered a similar fate. The degree of cold has been from 10° to 14° below zero, and it ranged at that for several days in January.

There is one circumstance that I cannot account for,

and that is this: Our village is situated at the foot of the Shawangunk mountain, on the east, and it is thought not to be so cold in winter on the flat as on the mountain, by two or three degrees. I was presented the other day a branch of a peach tree, by J. Bennett, Esq. which he cut from one of his trees, with the buds all alive, and in a healthy condition, and he informed me they were not injured on the mountain; and where he lives is not more than a mile from our village.

Query—Why are they not killed on the mountain as well as on the flat? R. H. DRAKE. *Bloomingsburg, Sullivan Co., N. Y.*

It is not very unusual for fruit buds to be killed by frost in valleys, when they escape on hills; and the reason is, that the degree of cold is greater in valleys at such times. It has been repeatedly proved that the mercury will sink several degrees lower on the banks of rivers, in still, cold mornings, than on points elevated 200 or 300 feet higher. The gravity of the air is in the ratio of its coldness, and consequently falls into the lowest places, when not disturbed by wind. EDS.

### Seedlings vs. Suckers.

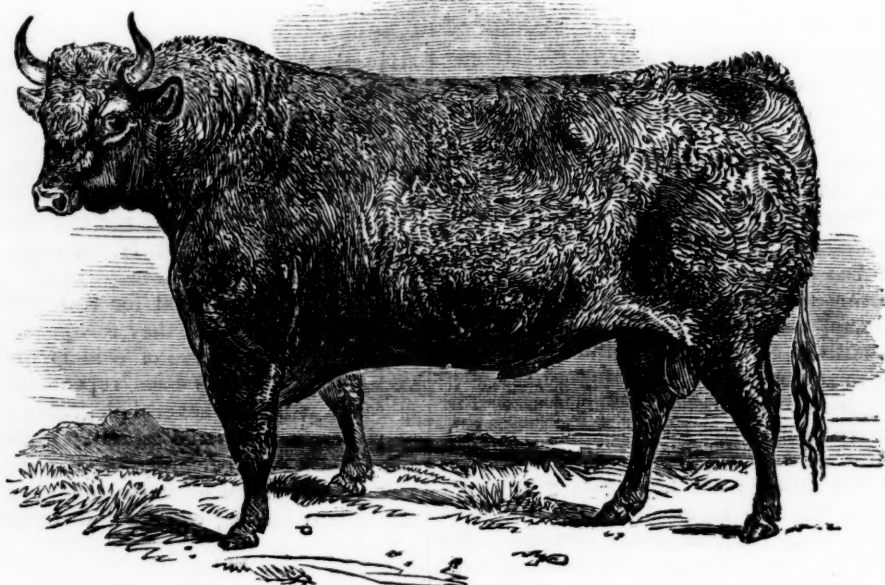
EDS. CULTIVATOR—Notwithstanding all that has been written and published in our various Horticultural Journals respecting the merits and demerits of seedlings and suckers, as stocks for the production of fruit trees, I am of the opinion that the true cause of the inferiority of the latter for this purpose, has never yet been fully brought to view. Mr. Downing, than whom there is perhaps no higher horticultural authority in our country, says it is because "Suckers are always more liable to produce suckers." With all due deference to such distinguished testimony, if I may be permitted to speak from experience, (and it is by experience alone that the question can be determined,) I would say that the seedling is just as liable to produce sprouts as the suckers.

During the past year, I have trimmed with my own hands, preparatory to transplanting in the nursery, at least 50,000 seedlings, and I found invariably on the different varieties, many plants with from one to six suckers; and let any nurseryman try the experiment by trimming and shortening the tap root of any quantity of seedlings, and heel them in during the fall, letting them remain in the ground until the buds begin to expand pretty freely in the spring, and he will find sprouts or suckers enough to satisfy him of the truth of my assertion.

But the true cause of the inferiority of suckers for stocks, I conceive to arise from the fact, that they have been accustomed to derive their chief support from the parent tree, through the medium of the large tap-root which adheres to it, as the small rootlets thrown out are generally too feeble to extract much nourishment from the soil. When this large tap root is broken for the purpose of transplanting, and the sucker loses the support of the parent tree, it often exhibits a sickly life, and frequently dies of sheer starvation. The difference therefore in profit to the nurserymen, to say nothing respecting the interest of the purchaser, I regard as equal to two hundred per cent. in favor of seedlings. So thoroughly satisfied do I feel on this point, that I have long since determined to grow seedlings in sufficient quantities to supply myself with them exclusively, and thus avoid entirely the use of suckers.

Peach seedlings which are still used in some places quite extensively, as stocks for the plum, are still worse, and the public generally, I think, ought to be cautioned against them. CHARLES HAMILTON. *Canterbury, Orange Co., N. Y.*

Be not in haste to turn cattle to pasture. It is best to keep them at the barn till there is a good bite of grass. Sheep may be turned out, on dry land, this month.



45—DEVON BULL.

## Different Varieties of the Ox.

### The Middle-Horns.

It is easy to trace our own breeds of cattle to the stocks of Europe. With the exception of those of South America, which sprung from animals taken from Spain, (see current vol. page 59,) they have been derived almost entirely from England. But our ideas of the origin of British cattle, must be in a degree conjectural. The progenitors of several of the present breeds were found in the possession of the ancient inhabitants of Britain, at the time of its invasion and conquest by Cæsar, fifty years before the Christian era. At what period, or in what manner those people, or their animals reached that country, cannot be told; they are events so remote that neither history nor tradition afford any light in regard to them.

In our remarks on the ancient Roman ox, (Feb. No. page 59,) we have alluded to the hypothesis that this primitive race formerly extended itself over a large portion of Europe, and that it may have been the origin of some of the British breeds. In the characteristics of these cattle, so far as we can judge, there is nothing which conflicts with this idea.

But whatever may have been the origin of the cattle of the British islands, it may be said that from the earliest times, two or three distinct tribes and stocks have existed there: viz. 1, the Long-horns, which originally occupied the low flat lands of England, and similar parts of Ireland, and were remarkable for the enormous length of their horns, their bulky frames and thick hides. 2, the Middle-horns, represented by the cattle of Devonshire, Herefordshire, Wales, and the Scottish Highlands; of which the semi-wild cattle of Chillingham Park, Northumberland, may be taken as the type. 3, in addition to these may be mentioned the Polled or hornless cattle, represented by the Galloway and other breeds without horns, which may have been derived from the semi-wild stock of Chatelherault Park, Lanarkshire, Scotland. Martin observes that these three breeds "are of untraceable antiquity in our islands [Great Britain and Ireland,] so that we may call them *original*, without entering into the question as to their primeval source."

In regard to the two wild stocks mentioned, and the relation they bear to the domestic British breeds, there has been considerable speculation. Some have supposed

ed that they were originally wild, have never been domesticated, but that the domestic breeds of which they are considered the type, have been derived from them. The conclusion, however, which has latterly been more generally adopted, is, that these cattle are descended from a domestic stock, which in early times were allowed to roam in a great degree unrestrained, and finally became emancipated from the control of man.

It is admitted that there is a great similarity between these wild stocks and some of the tame breeds. All the middle-horns, especially the Devon and West-Highland breeds, show an evident affinity with the Chillingham stock; while the Galloways are evidently closely allied to the Chatelherault cattle. The latter are larger and more robust than the Chillingham, and are mostly without horns; which, with their likeness to the Galloways in shape, gives support to the idea that they had a common origin. But we shall recur to this, in noticing the Galloways.

The middle-horns are found in Devonshire and the western counties of England, in Wales, Scotland, and parts of Ireland. They are believed to have constituted the stock of the ancient Celtic inhabitants of those districts; while the long-horns, another original stock, probably occupied the low, flat lands of both islands. As to the short-horns, we shall show, in the proper place, that they are not of British origin.

Circumstances connected with the history of Britain, have tended to preserve the middle-horned breeds of cattle in great purity. The country in early times was often subjected to the inroads of invading enemies. The property of the natives, in those days, consisted principally of their cattle; and as the encroachments of the conquerors forced them to retire to the mountain fastnesses, they naturally took with them their animals, on which their subsistence in a great degree depended. In these inaccessible regions, the people remained with their herds, in comparative security and independence. "They were proud of their country, and proud of their cattle, their choicest possession." "It thence resulted," says Youatt, "that in Devon, in Sussex, in Wales, and in Scotland, the cattle have been the same from time immemorial."

That the middle-horns have all descended from a common stock, is evident from their general characters. "The slightest observation," observes Youatt, "will convince us that the cattle in Devonshire, Sussex, Wales, and Scotland, are essentially the same. They





46—WEST-HIGHLAND OX.

are middle-horned; tolerable, but not extraordinary milkers, and remarkable for the quality rather than the quantity of their milk; active at work; and with an unequalled aptitude to fatten. They have all the characters of the same breed, changed by soil and climate and time, yet little changed by the intermeddling of man. We may almost trace the color, namely, the red of the Devon, the Sussex, and the Hereford; and even where the black alone are now found, the memory of the red prevails; it has a kind of superstitious reverence attached to it in the legends of the country; and in almost every part of Scotland, and in some of the mountains of Wales, the milk of the *red cow* is considered to be a remedy for every disease, and a preservative from every evil. Every one who has had the opportunities of comparing the Devon cattle with the wild breed of Chillingham castle, has been struck with the great resemblance in many points, notwithstanding the difference of color."

**THE DEVON BREED.**—Of this breed there are two varieties, commonly known as the North and South Devons. The former are the finest in form, and are held in the highest estimation for fattening and for labor; the latter are thought best for the dairy. The characteristics of the North Devon bull (fig. 45) may be given as follows: The head small; the muzzle fine; the nostrils wide; the horns tapering, and of a waxy yellow; the eye large and clear; the neck round and arched above, with little dewlap; the chest broad and deep; the breast prominent; the limbs fine-boned; the forearm muscular; the hips high, and the hind quarters well filled up; the tail long, slender, and set high.

The ox is taller and more delicately formed than the bull. He has fine withers, a slanting shoulder and prominent brisket; the legs are rather long, but fine-boned, strong and muscular; the neck is light, and rather long; the head small and the muzzle fine; the horns longer, more slender and tapering than in the bull. The whole form and appearance indicates sprightliness and activity. The skin is of moderate thickness, mellow, and in the best animals, covered with soft, curling hair. Those with straight hair are not so highly prized. Youatt says—"Good judges of these cattle speak of these curls as running like little ripples of wind on a pond of water. \*\*\* Those with curled hair are somewhat more hardy and fatten more kindly." The color is red, or bay. The best-bred families have a dun-colored ring around the eye and muzzle. When well fat-

tened, the oxen sometimes weigh 1400 pounds or more, the four quarters. The ordinary weight at four to five years old, is from 800 to 900 pounds.

The cow is much smaller than the bull, and the bull is considerably less than the ox. She has a beautiful head, and, like the ox, a countenance denoting great intelligence. For the dairy, the Devon cow holds a moderate rank. Her milk is of remarkable richness, eight quarts producing, on an average, a pound of butter, and the butter is noted for its richness and fine flavor. Some breeders have lately paid more attention to the dairy qualities in this breed, than formerly, and Mr. Bloomfield, of the county of Norfolk, England, obtained a prize a few years since, for having produced an average yield of over 200 pounds per cow, in a dairy of twenty cows.

Some of the finest North Devon cattle have been imported to this country, and there are now, in different sections, several established breeders of this stock. Among these, may be named GEORGE PATTERSON, of Baltimore, LEMUEL HURLBUT, of Winchester, Ct., and H. N. WASHBON, of Butternuts, N. Y. The Massachusetts Society for Promoting Agriculture, have imported some very fine animals of this breed, from which there have been bred others of good quality.

The breed has succeeded well here, and has proved better adapted to our hilly and unfertile sections, than larger breeds. They are hardy, generally healthy, thrifty and active. The best families are fine beef cattle, laying their flesh on the valuable parts, and giving that which is of fine grain and well marbled. It should be remarked, however, that proper attention has not always been paid by breeders to what is technically called *quality*—that is, a tendency to fatten, and to make the right kind of beef. Hard-fleshed, *lery* animals have been allowed to propagate, and have sometimes been taken for just specimens of the breed. The reputation of the Devons has suffered, somewhat, in consequence of such false notions and bad breeding. But the error is now in a fair way to be corrected; people are beginning to have a better idea of the proper points and characteristics of cattle.

The Devons are good working cattle. The oxen are active and good travellers. For the plow, on light soils, they are unrivalled. They have long been celebrated in England for this purpose. Youatt says—"Four good Devonshire steers will do as much work in the field, or on the road, as any three horses, and in

as quick and often quicker time. The only objection to the breed for the yoke, in this country, is that it is not easy to obtain oxen of sufficient size for the performance of the heaviest labor. We think this objection may be obviated in a great degree, by proper attention in breeding.

An idea has prevailed to a considerable extent, that the common cattle of New England, often called "natives," were originally North Devons. We are able to trace, comparatively, but little resemblance between them. Our "pilgrim fathers" probably introduced cattle of several breeds—though there may have been no special design of this kind. They sailed from Plymouth, a port in the south part of Devonshire. Their cattle were probably collected in the neighborhood, or as convenience favored. According to the early records of the colony, the first brought over comprised animals of various colors—red, black, and "white-backed." We have now before us an extract from an ancient document, giving an account of the division by lot, of the first cattle imported by the colonists of Plymouth, Massachusetts. The animals are not particularly described, but the colors are in several instances mentioned, and they are referred to as having been brought over in "*the Jacob*," and in "*the Ann*,"—names of vessels. "*Four black heifers that came in the Jacob*," are spoken of as having been put into different "lots," in apportioning the stock among the people.

A person familiar with the New England cattle, especially as they were found thirty years since, when they had been little changed by modern importations—will recollect how frequently those of a brown or black color were met with; and one might almost fancy he could trace the blood of those "four black heifers" in some of the short-legged, hardy oxen of the granite hills. The color and points of these cattle answer to the description of those of Cornwall, a county forming the south-west peninsula of England, and adjoining Devon on the west. The Cornish cattle are said to resemble those of Wales and the Highlands of Scotland.

But most of the New England cattle have been red. This has generally been the color of the larger animals. For the most part, they correspond to the characters of the South Devons, a variety differing considerably from the North Devons, being larger boned and coarser, with black noses. It is proper to remark, however, that strong indications of Sussex blood, are shown by some of the best of our "native" oxen and cows.

**THE WEST HIGHLAND BREED.**—The West-Highland or *Kyloe* breed of cattle (fig. 46) is found on the western coast of Scotland, and on the Hebridian islands. The county of Argyle, and the islands of Islay and Skye, are said to furnish the best. No breed can have stronger claims to the title of *aboriginal* than this. It is thus noticed by Martin: "It may be observed that, from the most remote times, this land of heath and mountain, [Scotland,] has been the nursery of an original breed or race of black cattle, of wild aspect, of beautiful symmetry, and though small, yet vigorous and hardy; patient of hunger and cold, and rapidly fattening on tolerable land. \*\*\* If we may venture an opinion, they display more nearly than any other breed, the characters of the mountain cattle of our island, when invaded by Cæsar." Like their congeners, the Devons, they bear a close resemblance to the wild stock of Chillingham park. Martin says, "Change the color from black to white, and there is little difference between a beautiful *Kyloe* from Arran, Islay, or the Isle of Skye, and one of the wild cattle of Chillingham."

These cattle possess uncommon hardiness of constitution. The territory of Scotland lies mostly between 55 and 58 deg. of latitude, yet the *Kyloes* subsist sum-

mer and winter, on their native mountain ranges, without shelter, and generally without other food than what is afforded by the pastures of those wild regions. In winter they browse on the heather, or crop the scanty grass, which they are often obliged to obtain beneath a covering of snow. Thus they live and thrive, where most other cattle would utterly starve. Such is their tendency to fatten, that when removed to favorable situations, they will, with good feeding, frequently gain a fourth to a third of their weight in six months. Their proportion of offal is not greater than in the most improved larger breeds; they lay their flesh and fat equally in the best parts; and when fat, the beef is fine in the grain, highly flavored, well marbled, and commands the highest price in every market. The nett weight of the grass-fed oxen, at four to five years old, is put down at 500 to 800 pounds, the four quarters—though it is not unusual for those which are well fatted, to weigh upwards of 1,000 pounds.

The points of the West-Highlanders are given by Martin as follows:—"In a well-bred *Kyloe*, the following characters are conspicuous: The head is small and short, with a fine and somewhat upturned muzzle; the forehead is broad; the horns wide apart at their base, tapering, and of a waxen yellow; the neck is fine at its junction with the head, arched above, and abruptly descending to the breast, which is broad, full and very prominent; the shoulders are deep and broad, and the chine is well filled, so as to leave no depression behind them; the limbs are short and muscular, with moderate bone; the back is straight and broad; the ribs boldly arched and brought well up to the hips; the chest deep and voluminous; the tail high set and largely tufted at the tip; the coat of hair thick and black: such is the bull. The ox differs in proportion. The cow is far more slightly built, and her general contour is more elongated. Although, as we have said, black is the ordinary or standard color of the *kyloe*, many are of a reddish brown, and some are of a pale or whitish dun."

The milk of the West-Highlanders, though not afforded in great abundance, is of extraordinary richness, and the butter made from it is highly esteemed for its superior flavor. There is good reason to believe that the oxen would prove equal to any breed for labor. Sir John Sinclair states that he tried various breeds for this purpose, and that from Argyle he "got as quick, honest and hardy workers, and profitable fatteners as could reasonably be desired." Their form is indicative of great strength and energy.

We have on former occasions, suggested the advantage which would result to many sections of this country from the introduction of the West-Highland cattle. It seems to us that these and the Galloways, would be better adapted to our northern districts, and mountain ranges, than any other breeds.

The figure herewith given, is that of a West-Highland ox, five years old, exhibited by His Royal Highness Prince Albert, at the Smithfield Show of fat cattle, 1847, and which received the first prize in the class of extra stock.

#### WEEKLY AGRICULTURAL MEETINGS AT BOSTON.—

These meetings are held at the State House every Tuesday evening during the session of the Legislature. The organization for the present year is as follows: Hon. M. P. WILDER, President; Lieut. Gov. REED, Hon. CORNWELL LEONARD, Vice-Presidents; WM. BUCKMINSTER, S. W. COLE, LEVI BARTLETT, Secretaries. This, we believe, is the tenth winter during which these meetings have been held, and it is stated that more interest has been manifested in them during the present session than ever before. We shall probably give some account of its discussions hereafter.



## The Farmer's Note-Book.

### The Manufacture of Maple Sugar.

EDS. CULTIVATOR—As maple sugar is becoming an important article in the product of our farms, it is important that every farmer, having a sugar-orchard, should know how to make such sugar as will command the highest price in the market, and also be the best to use at home.

Some of the sugar, made for exhibition at our fairs, though very *white* and *nice* to look at, is not very *sweet*; it has been not only drained, but bleached, by having water passed through it—a process which takes out not only the sweetness, but a large share of that peculiar *maple flavor*, which constitutes its excellence. If sugar is black and dirty, it may be improved by draining, but if rightly made, there will be no dirt in it, and very little color, so that it will need no draining.

To make good sugar, the manufacturer must take for his motto—*cleanliness*—and stick to it from first to last. The buckets, store tubs, and every thing the sap or sirup passes through, should be perfectly *clean* and *sweet*, so that the sap or sirup, when put into the pans for boiling, may be as clean as milk for the cheese-tub, or cream for the churn.

In tapping trees a  $\frac{1}{2}$  or  $\frac{3}{8}$  inch bit is preferable to a larger one; a small wound being much the least injurious to the tree. Nails for hanging up buckets, are generally made much too large and too long. The best that I have used, are made of wire, of suitable size, cut off about  $1\frac{1}{4}$  inch long, then drawn out a little at one end, and headed at the other. The sap is most easily carried to the sugar-house in spouts, where the sugar-orchard is so situated that it can be done; but when a team is used, the sap is gathered most conveniently, in tubs made largest at the bottom, the upper head being three or four inches from the end of the staves, and having a hole sawed in it, large enough to admit a pail for pouring in the sap; over this should be fastened a cloth strainer, to separate the leaves and pieces of bark that may have blown into the sap.

Sheet-iron pans are generally used for boiling, and where the saving of fuel is an object, two may be heated by the same fire—a large one in front, and a smaller one between that and the chimney. The old method of boiling in kettles, as still practiced by some farmers, is hard business; requiring much more time and fuel, besides making sugar of an inferior quality.

When the sap is boiled to a sirup, it should be strained through a woollen strainer, and left to settle one or two days. It should then be poured back into the pan, (leaving the settlings, if any there are) and sugared off. If the sap has been kept clear and free from rain-water, the sirup will be as clear as honey, and will need no cleansing; but if by any means, the sirup has got much dirt or color in it, it should be cleansed. If after cleansing there remains any of the curd or other impurities, the sirup should again be strained through a flannel strainer, always giving it time to run through without squeezing, but as there is considerable work in cleansing, besides a shrinkage in the sirup, it will be found much cheaper to *keep the dirt out* than to *cleanse* it out. The nicest sugar I have ever seen, was boiled in bright tin pans, from the sap directly to sugar.

As sugar sells best in small cakes, of from 2 to 8 oz. weight, it should be run in moulds of this size. Moulds of tin and wood are used, but wood is much the cheapest and most convenient. They are easily made by nailing strips of wood, at equal distances, upon a board made perfectly smooth and level—the strips to be a little the thickest at the bottom, that the sugar may easily be taken out. Cross strips are put in, by sawing

spaces in the ones already nailed down, which last strips will of course need no fastening, being taken out with the sugar. The cakes may be of any size, according to the thickness of the strips and their distance from each other. When the sugar is done, the pan is taken off and the sugar stirred until it begins to grain—then dipped upon the moulds, and the top levelled by passing over it a straight piece of board, as fast as the sugar is poured on. Nice sugar, made in this manner, will always sell well, without reference to the price of common sugars, being sold as an article of luxury.

For home consumption, many think stirred sugar altogether the best, and most convenient. To make this the sugar is done about the same as to cake, then taken out and stirred rapidly till dry—afterward occasionally stirring it to keep it light. Though stirred sugar may not be quite so white as that not done as much and then drained, yet, when the trouble of draining, the loss of sweetness and flavor is considered, we think the stirred sugar altogether preferable to use in cooking.

It is a common, but mistaken opinion, that good sugar cannot be made the last of the season. Two years ago, when the sugaring was about over, and the buckets sour, I brought them to the sugar-house and scalded them over, after which there was a run of sap, which was made into stirred sugar, which drew a premium at our next fair. As I took no extra pains, it was not so white and nice as some lots of drained sugar, which were equal in appearance to the best double-refined loaf; yet, it was so nearly white, that those unacquainted with the manufacture of maple sugar, could hardly be convinced it was not drained. Though the last runs may not generally make so good sugar as the first, yet there can be no doubt *sour buckets* are more at fault than the lateness of the season, or the swelling of the buds.

Those who make maple sugar, know there is *hard work* in it, and though there may be *extra* labor in making *nice sugar*, yet when we consider that one pound of first-rate sugar, is worth more than two of the black stuff that sometimes passes, or is offered for sugar, it is easy to see, that those who make the best article, receive the best reward for their labor. JOHN TUFTS. Wardsboro,' Windham Co., Vt., March, 1849.

### National Meteorological Observations.

EDS. CULTIVATOR—We have noticed with much pleasure, a circular issued by Profs. Henry, of the Smithsonian Institute, and Espy, of the navy, on the subject of observations on the meteorology of our country, especially with reference to American storms.

The movement is one which we may well suppose in the present age will not receive universal approbation. Yet, although many may deery and say it is of no importance, a mere throwing away of money, we conceive the project to be one of vast importance to advancement in science, and of a practical utility which can be appreciated only when much better understood, than it is at present.

There is probably no class that will receive greater benefit from these observations, if they are carefully noted, than the farmer, for who is affected by storms and frosts, and wind and change of temperature more than him? The tendency of meteorological observations, is to note these changes with atmospheric appearances preceding them, which, if his own observation would do, would undoubtedly enable him to avoid many an unforeseen catastrophe. They will also establish climatical differences more clearly than they have yet been done, and in this way render him much service.

We hope for the glory of the nation and the well being of all its subjects, this noble enterprise will be

faithfully carried out, and am sure that every "native American," faithful and true to the interest of his country, will rejoice to see Congress make such appropriations as are necessary to consummate the object. W. BACON. *Richmond, Mass., March, 1849.*

#### Manger Feeding.

EDS. CULTIVATOR—That the common method of feeding horses by putting coarse hay in a rack before them, and giving them oats unmixed with other food, is not the best way, I am fully convinced. When hay is fed from a rack, there is usually much waste, as horses are apt to acquire a habit of selecting the best locks, and drawing the remainder down to be trodden on and mixed with their litter. When oats are fed in the common way, the horse swallows them so greedily that they are not half masticated, and consequently, a pretty large portion of them do not digest. Now both of these difficulties may be obviated, and a considerable saving effected by adopting a different management.

I will describe my method, and all who are pleased with it may do likewise. I prepared my manger for containing a quantity of cut feed sufficient to last a horse 12 hours, by making it 20 inches deep, and 18 inches wide at the top—each horse's portion being as long as the width of his stall. Narrow strips of board are firmly nailed across the top, 14 inches apart, to prevent the horse from tossing his feed out. I have a self-feeding machine for cutting hay and straw, with which one man can cut as much in half an hour, as three horses can consume in 24 hours. Each revolution of the wheel to which the knife is attached brings the straw or hay forward one inch, so that the whole is cut in pieces an inch in length. I feed oat straw and hay, in equal proportions, and keep the manger well supplied. Twice a day, (morning and evening) each horse is allowed three quarts of oats, put in his manger dry, and well mixed with his cut feed; I prefer mixing the oats with the other feed dry, because if wet some of it will become sour and unpalatable. Now the advantage of thus mixing the oats with the cut feed is obvious; for the horse cannot swallow the latter without first chewing it, and as he cannot separate the oats from it, he is obliged to chew them also, and consequently they all digest, and the whole of their nutriment is extracted.

Horses thus kept, and moderately worked, will be healthy, spirited and in good condition; old horses will do better on cut than on coarse feed, because less chewing is required; there is also an advantage gained by cutting the provender for horses that are kept much of the time in harness, as they will fill themselves quicker than with coarse feed, and therefore have much more time for rest. The only objections I am aware of to this system, are the cost of the machine and the labor of cutting; still I am well convinced that the saving of feed is more than an equivalent for these. Some may be disposed to take advantage of this plan to induce horses to eat musty hay, or such as has been spoiled in curing; but every farmer ought to be aware that such hay is always injurious, and is very liable to produce an inflammation of the kidneys.

Many farmers in this neighborhood have the impression that rye straw contains more nourishment than oat straw. I know not the origin of this opinion; perhaps the inference is drawn from the fact that a certain quantity of rye is of more value than the same quantity of oats by measure. But horses and cattle always give the preference to oat straw; (and their judgment in this case, is of some consequence;) besides, the analysis of the two, shows that oat straw contains considerable more of the principal nutritive ingredient (nitrogen) than is contained in rye straw. It should however, be borne in mind, that any kind of straw is

vastly inferior to hay in nutritive properties, and I would only recommend the use of the former for horses for the sake of economy, and when little labor is required.

Some prefer ground feed for graining; but if they will take the trouble to weigh their grists before sending them to mill, and again after their return, they will find the toll is an item worth considering. I doubt whether there is any kind of feed in which so many valuable properties are combined as in oats, and I would always give them the preference, except when their price in market is much higher, proportionally, than the other kinds of grain which may be substituted for feeding, as rye and corn. I can see little advantage, and no economy, in having oats ground, when we can feed them in such a way as to ensure thorough mastication. J. MCKINSTRY. *Greenport, Columbia Co., N. Y. February, 5, 1849.*

#### Digging Gold at Home and Abroad.

There is danger that the drain to the gold regions will leave the country very bare of laboring hands. Many, very many, have gone to the *diggings* of California, as hired hands, or on shares out of their own work, who at home, "to dig were ashamed." Mere drones and loafers will not be missed; but clerks and young mechanics in the towns and cities have gone, whose places must be filled by others. Farmers' sons, in many instances, have gone, leaving the homesteads to be cultivated or not, as their fathers may find help. This state of things calls upon those who are left to be up and doing;—to lay their plans judiciously;—to use such labor-saving machinery as they find applicable. Let no one take more ground under cultivation than he can manage well and in good season. Let the manure be all well applied. It may be, that a fair application of mind and hands and means at home, may bring a harvest as profitable, all things considered, as the generality of gold seekers will reap. It will be attained with infinitely less anxiety and danger, in all cases; and be followed, in most cases, with less regret. D. M. *Allegheny Co., Pa.*

#### Transplanting Forest Trees.

As the season of the year for the transplanting of forest trees is near at hand, the following remarks may be useful. They were written by Mr. AMOS HITCHCOCK, of Pittsford, Vt., who obtained a premium from the Rutland County Ag. Society, for his success in transplanting forest trees. He describes his practice as follows: "About the first of May, or when the buds are considerably swollen, and spring so far advanced as not to freeze nights, we repair to second growth timber land, if we wish for maple or other forest trees. Provided with the necessary tools, we select our trees, avoiding crooked or ugly formed trunks, and commence the operation by digging a trench around the tree, eighteen or twenty inches from the tree, according to its size, and sufficiently deep to cut off all the large roots. The tree is then easily removed by the help of an iron bar, and a little hand lifting. Care is taken not to injure the small fibrous roots. After having dug in this manner, as many trees as we wish, they are conveyed on a box wagon to the place where they are to be planted. We now bring the trees to an equal length by removing all the top, say ten feet from the root. If there be small shoots below this point they are suffered to remain, otherwise the entire top is removed. The holes for receiving the trees having been dug at equal distances, and in a direct line, the roots are then wet that the earth may readily adhere to them, and the trees are planted to their original depth. Care should be taken to work the fine earth in among the roots, so that



no vacuum be left directly under the trunk. The turf should be placed snugly around the tree with the grass side up, and the whole pressed down with the foot or some suitable instrument. In this way, two men will carry to the distance of one or two miles, and plant from twenty-five to thirty forest trees per day."

The committee who awarded Mr. H. the premium, add the following to his statement: "In transplanting trees, though great care be exercised, there will be a severe loss of roots, and the tops should be reduced in proportion to this loss. Where stones can be procured, it is well to place a number of good size over the roots at a little distance from the trunk. They tend to prevent the roots from working in the ground, and also to keep the ground moist about the trees."

#### Good Crops in Indiana.

EDS. CULTIVATOR—IRA HOPKINS having stated in the November number of the *Cultivator*, (1848,) how thirty bushels of wheat could be raised to the acre, I have concluded to tell you how I raised one hundred bushels on three acres, and eighty-four bushels on three acres and eighty-nine rods, the past season, on land that produced but thirteen bushels to the acre in 1839, which was one of the best wheat seasons in this neighborhood, we had been favored with for the last ten years.

In the spring of 1847, I plowed three acres of clover and timothy sod, as deep as possible. On the 16th April, harrowed, cross plowed, harrowed again, made drills about two feet eight inches asunder, manured the drills liberally, dropped potatoe sets in the drills, about nine inches apart, covered by running the plow both ways in each drill. Some days after, pulled a little off the top of each drill with a hoe. When the plants were 8 or 10 inches high, plowed the soil from each side of the drills, run a cultivator between to level and pulverise; run the plow both ways, and threw back the soil to the plants.

On the 14th September, commenced raising the potatoes with the plow, by taking eight or ten drills at a time, and plowing round them, the first furrow turned one side off the two outside drills, the next threw out the middle, the next turned over the other side, the next furrow turned up the space between the drills; thus plowing all the ground thoroughly, and so deep as to turn up a little of the subsoil. Used hoes after the plow, and when all was plowed, harrowed both ways. Then plowed the ground as deep as possible into lands, 2 rods wide. Sowed one rod at a round, and on the 30th of September, sowed one and a-half bushels of Mediterranean wheat to the acre.

We may let the wheat grow till I tell you of the produce of the potato crop; but I cannot tell you this exactly, though I can tell enough to show that a medium potato crop produces more value than a good corn or wheat crop. I sold 350 bushels at 25 to 30 cents per bushel—\$92.07. Kept 101 bushels of the middle-sized for seed. Gave the small ones to the cows, and supplied a family of thirteen persons eleven months, besides a man half of the time, and four or five hands a month in harvest. I may say that potatoes, last season, did not produce half as much, as they took the rot during a very wet time in August. When the weather changed the rot ceased, and none have rotted in the cellar. This is the first appearance of the potato disease I have seen, except the two previous years, the end attached to the stem, rotted in a few instances.

In April the wheat appeared too rank, and I turned 100 sheep on it for a few days; still some spots lodged. On the 20th June, reaped it—stacked it when cured. On the 6th September got it thrashed by a machine, and had 101 bushels, weighing nearly 63 pounds per bushel. Sold part at 72 cents per bushel.

You will observe the number of plowings this piece of ground got. From conversing with an Englishman and reading the Commissioner of Patents' Report for 1847, I find that the English and Germans, generally plow the ground twice at least, before sowing wheat.

The three acres eighty-nine rods, was clover and timothy sod also, and was manured in the winter of 1845 and 1846, with 80 two-horse wagon-loads of barn-yard manure, plowed deep and harrowed, and planted in corn. The cultivator was run four times through the corn, but the plow never. I think it produced 60 bushels to the acre. I did not measure it, but I measured another field the same season. The spring of 1847, sowed it with barley, and it produced only seventeen bushels to the acre, and never got more than this of spring barley to the acre. After harvest, I scraped up all the manure I could get, and scattered it over the stubble, plowed it down, and on the 11th September sowed six bushels of what is called red-chaff wheat, on the furrow, and harrowed it both ways. Reaped on the 22nd June, got it thrashed by a machine, on the 6th September, and had 84 bushels bright plump wheat, rather over 63 lbs. per bushel.

I delayed forwarding this, till I had got out some barley, the produce of three acres and 157 rods, on which I sowed 11 bushels, or  $2\frac{3}{4}$  bushels to the acre, which is half a bushel more than I ever sowed before. It was highly manured in the spring of 1847, and planted in corn and pumpkins, and brought about 60 bushels corn to the acre, and an immense quantity of pumpkins. The produce is 70 struck bushels, weighing rather less than 48 lbs. per bushel, which is the legal weight of barley in Indiana. In 1847, I sowed eight bushels on three acres eighty-nine rods, or about  $2\frac{1}{4}$  bushels to the acre, and had  $61\frac{1}{2}$  bushels, weighing 49 pounds per bushel—each producing about 17 or 18 bushels per acre. In 1846, I sowed 11 bushels on  $5\frac{1}{4}$  acres or two bushels to the acre, and had but 77 bushels, or 14 bushels per acre. Part of this land was rather flat and wet, and I suppose all my land is too heavy for barley—it bakes very hard after rain. JOHN J. CRAIG. *Madison, Indiana, January 16, 1849.*

#### Breaking Rocks by Fire.

EDS. CULTIVATOR—While perusing the February No. of *The Cultivator*, I observed a statement from one of your correspondents in regard to the manner in which he cleared his land of stones. His mode was to excavate a large hole upon one side of the boulder, and partially under the rock which he wished to remove, and then roll it in. I think the process might well be replaced by one which is much more economical. Your correspondent observes that it is very hard to drill some "hard-head" rocks; an assertion which I truly confirm, having been engaged in the business myself, for weeks in succession, upon my father's farm, in Lewis Co., N. Y.

In 1843, we were clearing a piece of ground of stone by the aid of the drill and powder; one very cold day a fire was built upon a rock, which was, perhaps, 4 feet in diameter, near the wall where we are at work. By means of the heat there were large scales loosened on the top of the rock, which were taken off with a crow-bar, and used for filling up the centre of the wall.

Subsequent to this, a fire was built upon the same rock, and sometime after, the scales being removed, it was ascertained that the rock was broken through in two different directions, dividing it into four nearly equal parts.

The quarters being left with face sides, fitted them admirably for laying into wall. From this time henceforth, the drill was dispensed with. Experiment showed that one man could carry a sufficient quantity of

wood to break any rock, which a farmer might be desirous of removing from his fields. Another great advantage was, that wood of little value, such as old pieces of rails, stumps, and the like might be used with advantage and economy.

There is one point which must not be neglected, if success is expected; that is, to keep the rock clear of shells while heating. To do this with facility, the tools required are a sharp iron crow-bar and a pair of large tongs. As soon as any shells are found to have started up, the fire should be removed with the tongs, and the scales carefully taken off with the bar. This is the only secret in the process. The object is, that the heat may be applied directly to the solid rock. The fire should then be replaced with the tongs, and so on until the stone is broken. Throwing on cold water is superfluous.

One man can attend twenty of the fires, or one man can perform as much work in this as ten will with drills. The beauty of the process is, that it is performed comparatively without danger or expense. DENNIS JOHNSON. *Mount Airy Agricultural Institute, Pa., February, 1849.*

We have seen rocks broken by the process above described, and we endorse what our correspondent says in regard to it.—EDS.

#### Good Hogs.

EDS. CULTIVATOR—As you sometimes notice the weight of hogs in your paper, I am induced to send you the weight of two or three lots, slaughtered this season in my neighborhood—not because they will favorably compare with certain individual *pet porkers*, whose weights I have seen published—but because they were kept in the usual way—put up at the usual time, and fed from six to eight weeks only.

The first was a lot of four, twenty months old, butchered by Mr. David Connor, averaging 397 lbs. The second, a lot of fourteen, butchered by R. S. Wright, Esq. The largest weighed 568; the four largest averaged 472; the twelve largest averaged 405, and the whole lot averaged 397 lbs. The third, a lot of seven, butchered by Mr. A. J. Brest, averaging upwards of 300 lbs.; two of them, fifteen months old, averaged 334 lbs.

Several years ago, the Chester and Berkshire stock were introduced into this section of country, and have no doubt improved our breed; but few of the pure blood are now found. S. B. T. CALDWELL. *Wheatland, Va., January 16, 1849.*

#### Register of the Weather.

REV. D. C. SAUNDERS, of Medfield, Mass., has furnished the *Mass. Ploughman* with some remarks on the weather, based on a register kept by him from the year 1821 to 1848, inclusive. The observations were made during this period, three times a day—at sunrise, and in the afternoon at two and nine o'clock. The average annual temperature for the whole time, is 46 degrees, 52-100, Fahrenheit. But it is said “a writer on this subject would approximate nearly to the truth, were he to state the annual temperature of this part of the country at 50 degrees, as this thermometer was stationed on the North side of the house, in a very bleak place, where the sun never reached, and in the hot season, was always shaded by the thick foliage of tall trees and dense shrubbery.”

It appears that the former 14 years—from 1821 to 1835—were about 1° warmer than from 1835 to 1849; upon which the writer observes—“This fact opposes the general opinion, that the temperature of the country is higher than it was in former years. Every aged person knows that the winters now are not nearly so severe as they

were in the days of his youth. A thaw, in the winter, was never known in Vermont until about the year 1793, though since it has happened every season. Persons old enough to remember the cold winter here of 1780, when snow came high enough to cover up from sight all the walls and fences; when the crust of the snow was so firm as to bear up a traveller on foot any where; when the sun was not able to melt a flake of snow; and such extreme severity continued for more than six weeks, will not find it difficult to believe that the seasons have become much more mild. But if this climate has not become warmer, its temperature is certainly more equalized throughout the whole year. We have no such cold winters and deep snows as we used to have. Now, we have no Spring and frequent showers, as we had formerly. But we have a compensation in lovely Autumn. September has become a delightful month, far more so than half a century ago. October, if not November, is about as mild and sunny as September was in earlier times. Winter used to come rough, violent, and lasting, by the 10th November; now it often spares mildly to mortals the ‘merry’ days of Christmas.”

The average temperature of each month, for the twenty-eight years, is given in the following table:

January, .....	25.12	July, .....	69.41
February, .....	25.48	August, .....	67.70
March, .....	33.66	September, .....	59.72
April, .....	43.94	October, .....	48.60
May, .....	53.15	November, .....	37.87
June, .....	63.81	December, .....	28.78

This shows that January is the coldest and July the hottest.

The number of fair days per annum has been 211; cloudy days, 154; rainy days, 57; average depth of snow, 30 inches. “The warmest year was in 1828, at an annual temperature of 49 8-100 degrees; and the coldest year was in 1836, when the annual temperature was 43 63-100 degrees. This shows a difference between the coldest and hottest years, of 5 45-100 degrees. But, in general, the difference of temperature between whole years, is quite inconsiderable, or very nearly the same.”

#### Seasonable Hints.

As early in April as practicable, it will be proper to sow oats, barley, spring rye and spring wheat—excepting, in reference to the latter, those sections where the crop is liable to injury from the wheat midge. It has been found that this insect appears at a particular period, and that it only attacks wheat which is in a particular stage—or at least, it is only such wheat that is injured by it. If the crop is too far advanced it escapes, and so it does if it has not reached the stage necessary for the fly to deposit its eggs. The eggs are deposited at the time, or shortly after the wheat is in bloom. Hence, early-sowed winter wheat and late-sowed spring wheat, is least likely to be affected by the midge. But to counterbalance this advantage in regard to late-sown wheat, it is more subject to rust, and is less likely to fill well, generally, than that which is sown earlier. So that the farmer must choose between the different enemies by which he is likely to be assailed—that is, he must determine from which his crops are liable to be most injured, and direct his operations accordingly.

The Black-sea wheat has been found to succeed better under late sowing, than most other kinds. In Maine, Vermont, and the northern part of New-York, it has been sown the latter part of May and sometimes as late as June, and given good crops.

The usual quantity of seed, for spring wheat, is two bushels per acre. If the ground has been thoroughly stirred the previous year, it will not be necessary to plow very deep, though the soil should be well pulverized.



Of oats, it has formerly been the practice to sow only about two bushels per acre, and in some instances less; but so far as we are informed, all the large crops of this grain, have been obtained by sowing from three to four bushels per acre. It is not very uncommon, of late years, for from eighty to a hundred bushels of oats to be raised on an acre, but we have never heard of any such yield, when less than three bushels of seed was used.

Of barley, it is usual to sow about four bushels of seed per acre. The best soil for this crop is a warm loam. We have been informed that a fly similar to the wheat midge, commonly called the barley midge, has latterly attacked the barley crops in the western part of this State. Not having had an opportunity to examine the insect, we cannot speak in regard to the proper mode of preventing its ravages.

It is common to lay down lands to grass in connexion with most spring grains. If the object is hay, and the soil is of a medium character as to dryness, we would recommend the use of the following mixture for one acre:

Red clover, (*Trifolium medium*), 8 lbs. or 4 qts.

Timothy, (*Phleum pratense*), 8 qts.

Red-top, (*Agrostis vulgaris*), 1 bushel.

If the object is pasture, we should use the following:

Medium clover, 2 qts.

White do 2 qts.

(If white clover comes up in the soil without sowing, it may be omitted.)

Kentucky blue-grass, (*Poa pratense*), 8 qts.

Timothy, 4 qts.

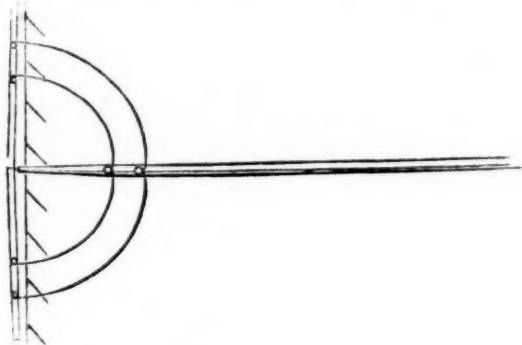
Orchard grass, (*Dactylis glomerata*), 1 bushel.

Red-top,  $\frac{1}{2}$  bushel.

On wet soils, the red clover may be omitted. The orchard grass requires a very large quantity of seed, on account of its light and chaffy nature. The different kinds of seed may be mixed together, by slightly wetting them, and may be readily sown by mixing ashes or plaster to prevent their sticking together. It is best to sow them after the grain has been harrowed in, and they will be sufficiently buried by a brush harrow, or a very light iron-tooth harrow.

#### Improvement in the Rake.

EDS. CULTIVATOR—Being a mechanic as well as farmer, I would take the liberty of suggesting a small improvement in the manufacture of the hand-rake. Instead of the wooden bow, take wire of a suitable



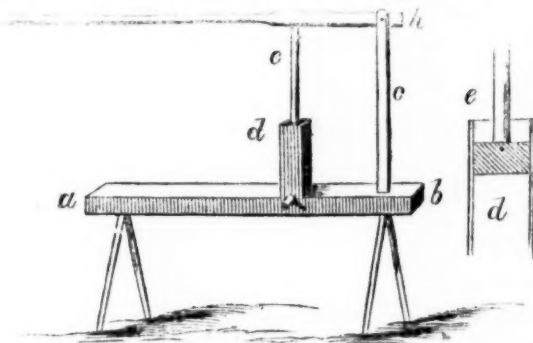
45—IMPROVED RAKE.

size, cut it off the right length, and bend it round so as to form a loop at each end, and in the middle, as represented in the annexed drawing; flatten them down a little, and after the handle is made fast in the head lay on the curved wire and insert wood screws through the loops into the handle and head. Rakes are more expeditiously made in this way than any other; they are cheaper, more durable, and much easier repaired. JASON SMITH. Tyre, N. Y., Feb. 24, 1849.

#### Sausage Stuffer.

EDS. CULTIVATOR—The following is intended to represent a sausage stuffer, which is in very common use in this section of country, and I think would be a proper accompaniment to the sausage cutter mentioned in the January number of *The Cultivator*, page 26. I think it preferable, in some respects, to the one mentioned in the December No., 1846, as almost any person can make one for his own use.

A. B. is a piece of scantling, about 4 inches square and  $3\frac{1}{2}$  ft. long, with four legs, about 18 inches high, something like a carpenter's trestle; C. is an upright piece, about  $2\frac{1}{2}$  inches square, and 18 inches long, mortised into A. B. tight, about 6 inches from the end; D.



46—SAUSAGE STUFFER.

a small box, about 10 inches from C., 9 inches high above A. B., and fastened to the same, and four inches square inside the box, in which the sausage-meat is to be put. There is a small tin spout on the side, near the bottom, through which the meat passes into the skins. E. about  $2\frac{1}{2}$  inches square, 14 inches long, mortised into a block 4 inches square, with a moveable joint, the block to fit pretty tight in the box D; and F. H. a lever,  $5\frac{1}{2}$  feet long,  $2\frac{1}{4}$  inches square at one end, and round at the other; which is used as a handle to work up and down the block on the end of E. which fits in the box D. A SUBSCRIBER. Loudon Co., Va., Feb. 12, 1849.

#### Benefits of Wool Depots.

EDS. CULTIVATOR—In conversation with gentlemen from different parts of the state during the winter, I find that the facilities for selling wool are far greater with us, than in many other sections, and that the depot system is imperfectly understood and appreciated by many. In view of these facts, I thought it might not be amiss to suggest some thoughts for the information of those who are unacquainted with the operation of that system; believing as I do, that if they understood the advantages to be derived from it, all who have to depend on the agents of manufacturers, or the speculator, for purchasers, would patronize the depot.

The greatest objection I find to this course, is a want of confidence in the responsibility of the agents. Three depots only have as yet been established, and I can speak of only one of the agents, as I am unacquainted with the others.

With Mr. Blanchard, the agent at Kinderhook, I am well acquainted, and know him to be well qualified in all respects to conduct such an establishment, and that his experience for several years past has added greatly to those qualifications; that he is a man of sterling integrity, that he has given general satisfaction, and enjoys the confidence of all who have patronized his establishment; and I recommend him to all who approve of the depot system, as every way worthy of their patronage.

The depot system is conducted upon the well known principles of all other commission business, and facilitates the sale of wool by collecting large quantities of

the various grades at one place; thereby enabling the manufacturer to purchase the grades adapted to the style of goods he makes; inducing many to visit the depot for that purpose, and creating competition advantageous to the seller. But a greater advantage arises from the fact that the agent understands, and can judge of the value of the article with as much certainty as the farmer can judge of the value of a bushel of wheat, or a pound of pork; for with those articles, the farmer has a basis on which to found his estimate of their value,—the prices of flour and pork per barrel being a reliable standard; so with beef and all kinds of grain; the difference in the quality of these articles being so small, and the standards of weight and measure so well understood, that he can arrive at their value with great certainty.

Not so with the article of wool; that has many different grades, each bearing a different price, varying from twenty to sixty cents or more per pound, and any of the well selected flocks have qualities differing in value from twenty to twenty-five cents per pound.

These different qualities cannot be known with any degree of certainty to the grower, because it requires much practice in handling and assorting for the manufacturer, to make a man a competent judge of the different sorts contained in any flock; hence, from the nature of the farmer's pursuit, the impossibility of his knowing the difference; hence also the importance of a depot for wool, where it may be assorted by skilful hands, making the value of each sort available to the grower.

To fix a price for wool, there must be a reliable basis on which to found that price; with that also, the grower is as much in the dark as in determining the different qualities of his wool; but with this the agent is as familiar as with the different grades he handles, basing that knowledge on the prices of cloths in market, and knowing the grades of wool of which the various qualities are made, and the price of manufacturing each quality, he has no more difficulty in determining the value of the different sorts than the farmer has in determining the price of a bushel of wheat, by the value of a barrel of flour; and from the knowledge he has of the cloth and wool markets, and the quantities of each in the different markets in the country, he is better able to judge of the fluctuations of trade, and to calculate with more certainty the probable rise or fall in the market.

Assorting wool, and selling to the manufacturer, at the different prices he is willing to pay for those sorts, is what the speculator, as a general rule, relies upon for his profits,—paying the grower, as he usually does, for well bred flocks, about what the low grades are worth.

It is well understood by persons conversant with such matters, that the manufacturer is willing to pay more according to its value, for the grades he works, than he will for promiscuous lots of different grades, and that the manufacturer of fine wool, places a higher value on such wool, than the manufacturer of coarse wool; so also with the manufacturer of coarse wool, he places a higher value on the kind he works, than the manufacturer of fine wools.

Having wool assorted by competent judges, enables each man to determine whether his flock is above or below the standard of his neighbor, and whether he is pursuing the most judicious course in point of economy in keeping the kind of sheep he does.

The depot system gives an opportunity for interchange of views among wool growers, meeting at the depot, and communicating such information as they may have derived from experience; and enables them to form correct opinions of the different breeds of sheep, and what improvements are made in breeding; as the character

of each flock is ascertained from the books of the depot agent in such a way as to put at rest all dispute.

The number of fleeces are there registered, the different qualities ascertained, the weight of each, and the dollars and cents they produce; securing to the grower much valuable information and many facilities for the successful prosecution of his business;—enabling him to form correct views, draw correct inferences, and make them available to his interest, and gratifying to his desire for improvement. DANIEL S. CURTIS. *Canaan Centre, N. Y., March 10, 1849.*

#### The Spring Season.

EDS. CULTIVATOR—The spring is a most important season to the farmer. In all cold climates, where the warm and growing season is short, much depends upon getting our summer crops in, in good season, and in good order. The land should be well tilled, and the surface well pulverised, so as to give the roots of the young plants a healthful and vigorous growth in the early part of the season. This enables them to stand either too much wet, or too much dry weather, and the attacks of worms much better than if got in late in the season, or in bad order. The straw of grain sown early, is not as subject to rust or lodge, as that sown late; and grain which is forward, and ripens early, is usually much better and heavier than that which is late. The farmer who gets his crops in well and in good season, is most sure of a good yield; besides, if he gets his spring's work done early, he will be most likely to do the whole work of the season in good time, and will have time to do it well; while, if he gets behind time in the spring, he will be most likely to get behind time through the whole season; and being drove with his work, will not be likely to do it well; and if he keeps an account of outgoes and incomes, will be most likely to find his profits much less than they would have been, had his spring's work been done in season.

The spring is also important in another point of view. Almost all of our domestic animals drop their young at this season; and the same rule that applies to the vegetable, applies with equal force to the animal kingdom, viz: that we pay particular attention to them while young, so as to give them a healthful and vigorous growth in the start. All experience has shown that if we would rear good stock, we must give them good keeping while young. In cold climates, all animals intended to be reared, should be dropped as early as the climate and season will admit. This enables them, with good keeping, to become so large and hardy, as to stand the first winter well; while if dropped late in the season, and poorly attended to, their small size,—slender and feeble constitution, ill fits them to stand our severe winters. The first of March is the best time for calves. This enables them to make good use of the early grasses as soon as they start, and gives them the benefit of the whole season of pasturage. And further, the dams of all young animals, require particular attention and good keeping at this season, or they will run down and become poor. Dairy cows especially, should have the best of care, if we expect a good yield from them during the season. The milk drawn from the cow is a monstrous draft, and if she is suffered to get poor in the spring, she will remain so during the season, and the yield of milk will be small, particularly during the latter part of the season.

There are many other important matters to be looked to during the spring. Do your old meadows need harrowing and manuring, and additional grass seed? If so, now is the time to attend to it.

Have you a sufficient number of fruit trees, and of the different kinds best suited to your soil and climate? If not, this is the time to plant them.



Have you a sufficiency of shade trees and shrubbery to make your situation pleasant? If not, now is the time to plant them. It will cost you but little labor. Plant them, keep cattle from them, and natural agents will do the rest.

Although we would not encourage extravagance of style in our common farmers, still we can see no good reason why they should not practice and encourage correct taste, as well as those engaged in other pursuits. It is believed that those farmers who are the most particular in all their operations, are the most prosperous, provided they avoid what may, (as applied to farmers) be justly termed extravagance.

The time when a particular job is done, may not be of much importance to the manufacturer or mechanic, but to the farmer it is all important that he does almost every thing at the right time. He has to depend upon natural agents for success; and they will not come to his aid, unless he accommodates them as to time. Nature does not alter her laws or rules, to suit either the ignorance, misjudgment or slackness of the farmer. If he plants his corn too late in the spring, she will not stay the frost in the fall to give it time to ripen. If then, we would be benefited by natural agents we must so observe their laws as that they come most readily to our aid; and there is no season of the year when this observance is more important than in the spring. **FARMER.** *Columbia, Feb. 24, 1849.*

### Notices of Publications.

**THE AMERICAN FARM BOOK;** or Compend of American Agriculture; being a Practical Treatise on Soils, Manures, Draining, Irrigation, Grain, Roots, Fruits, Cotton, Tobacco, Sugar-Cane, Rice, and every Staple Product of the United States, with the best methods of Planting, Cultivation, and Preparation for Market: By **R. L. ALLEN.** New-York, C. M. SAXTON.

"The American Farm Book" is a handsome dollar volume, by one of our most correct agricultural writers, systematically arranged, and embracing these subjects of most general interest to the practical farmer, treated in a plain and popular manner. It is a reproduction of the "Brief Compend of American Agriculture," published by the same author about two years since, and which met with so rapid a sale, as to induce a new and enlarged edition, under the more appropriate title now chosen; and we are glad to hear that this is intended as one of the first in a "Series of lessons for the American Farmer," to be issued by Mr. ALLEN; who, from his good judgment, familiar acquaintance with rural affairs, and ability as a writer, is peculiarly qualified for such a work. The volume before us will be found useful to the farmer of the north and the planter of the south, treating as it does of the staple products of every section of our country. It is illustrated by about 100 engravings, and is got up in a style, creditable to the enterprising publisher.

**THE ARCHITECT;** a series of Original Designs for Domestic and Ornamental Cottages, connected with Landscape Gardening, adapted to the United States; illustrated by Drawings of Ground Plots, Plans, Perspective Views, Elevations, Sections and Details. By **W. H. RANLETT.** New York.

We have on several previous occasions noticed this excellent work. It continues to be published as heretofore, at fifty cents each number, containing two complete plans of houses, with full estimates of the cost. The work is doing much good by the dissemination of correct information on architecture.

**AMERICAN JOURNAL OF SCIENCE & ARTS.**—We have received the March number of this excellent work. As usual, its contents are of a high character in a scientific view. Among other articles, we notice the following: Some new discoveries respecting the Dates on the Great Calendar Stone of the Ancient Mexicans, with Observations on the Mexican Cycle of Fifty-two Years, by **E. G. SQUIER**; on the comparative value of different kinds of Coal for the purpose of Illumination; and on methods not hitherto practiced for ascertaining the Value of the Gases they afford, by **ANDREW FYFE**; Parallelism of the Palaeozoic Formation of North America, with those of Europe, by **ED. DE VERNEUIL**, translated with corrections, by **JAMES HALL**; Notes on Upper California, by **JAMES D. DANA.** This work is conducted by Messrs. SILLIMAN & DANA, and published at New Haven, on the first day of every second month, at \$5 per year.

**THE SCHOOL JOURNAL AND VERMONT AGRICULTURIST.** is the title of a monthly (16 page octavo.) published at Windsor, by Messrs. BISHOP & TRACY, the editors of the "Vermont Chronicle," the Nos. of the current vol. of which have come to hand since our last. It is devoted in equal parts, to Agriculture and the cause of Education in Common Schools, a subject of great importance to our farmers, so many of whom are dependant

upon these schools for all the "schooling" they receive. It is handsomely printed, and published at the extremely low price of twenty-five cents a year, where 16 copies are taken.

**WORKING FARMER.**—We have received the first number of a publication with this title, published at New York, by **KINGMAN & CROSS**, and edited by Prof. J. J. MAPES. It is a well filled quarto of sixteen pages, and is to be issued monthly, at fifty cents a year.

**WOOL GROWER AND MAGAZINE OF HORTICULTURE.**—This is a periodical just started at Buffalo, by **T. C. PETERS, Esq.** It is to be published monthly, each number containing sixteen pages octavo, at fifty cents a year. Mr. P. is favorably known as an agricultural writer, and will, no doubt, make an interesting paper. It will give particular attention to all branches of the wool business. It is to have a horticultural department, to be conducted by **B. HODGE**, an intelligent and experienced cultivator.

### Answers to Correspondents.

**STAGGERS IN SHEEP.**—**A. G. M.,** Isle of Wight, Va. The disease you call "blind staggers," is what is called "sturdy" by veterinarians. It is caused by parasitic animals in the brain, called *hydatids*. The origin of these animals, and the means by which they are propagated, are not fully understood. Hogg, the Eutrick Shepherd, says the disease is most destructive on farms that are ill-sheltered, and on which the sheep are most exposed to blasts and showers. A cure is seldom effected. It is recommended to remove the animals, as soon as attacked, from wet places to dry situations. Some have been cured by trepanning, and the extraction of the hydatids.

**BONE SPAVIN.**—**W. C. B.,** Colchester, Ct. The disease which has attacked the hock joint of your horse, is probably bone spavin. The safest treatment for it is blistering, which, if long continued, may absorb the bony deposit, or at least lessen the inflammation. The use of the chisel or the hot iron, in cutting or burning the swelling, is discouraged by the best farriers.

**TOBACCO FOR SMOKING.**—**A. C. R.,** Walden's Ridge, Tenn. We are unable to give you the *modus operandi* of raising tobacco in Cuba, exclusively for smoking. An account of the mode of raising tobacco in Connecticut, will be found in the Cult for 1844, p. 59.

**FOWLS EATING FEATHERS.**—**"A SUBSCRIBER,"** Windsor, Ct. The habit of eating each other's feathers, which fowls often have, when confined in yards, is not perhaps, fully understood. It is a morbid appetite, apparently induced in the outset, by the impatience of the fowl under confinement. It is very difficult to cure, and we have known it to be kept up till some individuals of the flock, who were made special victims, were almost entirely stripped of their feathers, and sometimes have even had their entrails torn out. The best preventives are animal food, bones, (not burnt) oyster shells, charcoal, and a variety of grains, with clean apartments, and plenty of clean water. Sometimes a particular fowl, shows a more inveterate disposition to eat feathers than the rest of the flock. It is best to kill or remove such.

**TIE-CHAINS FOR CATTLE.**—**S. G.,** Bullville, Orange Co., N. Y. The common, and we think the best mode of using these chains, is around an upright stanchion, which is inserted at the lower end into a piece of timber, laid along to form one side of the manger, and for the cattle to feed over. A separate stall and feeding space is preferable for each animal. (See Cultivator for 1847 pp. 184, 185.)

**FATTENING HOGS.**—**W. R. W.,** Vienna Cross-Roads, Ohio. In answer to the question whether you "can raise and fatten fifty hogs on one thousand bushels of corn?" we think much would depend on the degree of fatness to which they were to be brought. But with a good breed of hogs and proper care in feeding, we should think 20 bushels of corn would make 200 pounds of pork—or ten pounds to a bushel. Some trials have shown twelve pounds to the bushel.

**USE OF LIME.**—**M. L. C.,** Sangerfield, Oneida County, N. Y. We should think it probable that lime would be useful as a manure on the drained swamp you describe, though at the price you mention, 18 cents per bushel, we have doubts whether its use would be profitable. Better to try it first on a small scale. The vegetable matter of the swamp would be valuable to absorb the urine of animals, and would probably be a good manure, mixed with ashes.

**WHITE CLOVER SEED.**—**W. R.,** Canada West. The price of this article is thirty-five cents per pound, by the small quantity. It can be had at the Albany Agricultural Warehouse. It is not easy to save the seed, as it is seldom grown by itself. Most of the seed sold in this country is imported from Holland.

**GRAFTING PEACHES.**—**C. S.,** Shelburne, Mass. Peaches are not readily propagated by grafting, and we should think it would not be an object to make the attempt. Budding is the mode generally adopted for this fruit. In regard to remedying the difficulty you experience from the buds winter-killing, we should be glad to receive the suggestions of our correspondents.

**MADDER.**—The proper time to obtain the roots of madder is autumn. They can be had of **J. EATON**, of West Winfield, N. Y., at \$2.50 per bushel—delivered at Utica.

**GRASS FOR PARKS.**—**W. H. T.,** New York. It is not easy to obtain a firm, velvety turf, in closely wooded parks. The best grass we are acquainted with for this purpose, is the common spire grass, or Kentucky blue grass—*Poa pratensis*. Of the Bermuda grass, grown in the Southern states, we have no personal knowledge. The seed of the Kentucky blue grass can be obtained of the seedsmen in New York. It may be sown any time in spring, when the ground is moist. About a bushel, or ten pounds of tolerably clean seed, will be sufficient for an acre.

## Notes for the Month.

COMMUNICATIONS have been received, since our last, from A Subscriber, B. B. P., A. G. Moody, R., T., Agricola, S. W. Gold. A Subscriber, R\*\*\*\*, Jason Smith, Farmer, W. Bacon, Fleming Grove, G. H. Dadd, J. W. Bailey, J. S. Pettibone, John Tufts, Daniel S. Curtis, M. L. Conger, S. E. Todd, Sportsman, Charles Smith, M. S. Bailey, S. W., R. D. Weeks, I. Hildreth, L. B. G., J. McKinstry, J. D. Spinner, C. W. Hillman, R. H. Drake, F. E. Stowe, Reed Burrett, A Practical Farmer, A. J. Keeney, A Raw Hand, Subscriber, E., B. M. Ellis, A. L. Fish, O. R., B. C. M., A subscriber, E. C. Frost, S. W. Jewett.

BOOKS, PAMPHLETS, &c., have been received as follows: Transactions of the Mass. Ag. Societies for 1847, and of the Worcester Co. Society for 1848, from J. W. Lincoln, Esq.—Catalogues of Thorp, Smith & Hanchett's Syracuse Nursery, and of Hovey & Co's Pears, Boston—of the Delevan Nursery of F. K. PHENIX, Delevan, Wisconsin—of B. M. WATSON's Nursery, Plymouth, Mass.—of C. HAMILTON's Nursery, Canterbury, N. Y.

Though we publish over thirty communications this month, we have still a goodly number on hand, several of which were intended for this paper, but are delayed simply for want of room. Among these, are those of Dr. MARTIN, Mr. HOLBROOK, Mr. BAILEY, W. C. W., (this was accidentally mislaid, or it would have had an earlier insertion,) S. W., and others.

POSTAGE OF THE CULTIVATOR.—In answer to several inquiries, we repeat the notice heretofore frequently given, that "The Cultivator" is subject to "newspaper postage only." See certificate of Postmaster General, in our last year's vol., p. 97.

TO OUR AGENTS.—It is not necessary that all subscribers should be at one place, or that all names should be forwarded at one time, to enable Agents to receive the paper at the club prices. For instance, if an Agent sends us \$2 for two copies, he will be entitled to five more copies for \$3—an Agent sending \$5 for seven copies, will be entitled to three more copies for \$2, or eight more for \$5—and three copies for every \$2 sent afterwards. We will send the papers to any number of post-offices named, addressed to the individuals named.

R. R. P.—We have not one of the numbers you require to complete your vols. of the Cultivator. All our unbound Nos. of Vols. 7, 8, 9 and 10, old series, were burnt.

AGRICULTURAL EDUCATION.—The subject of establishing an institution for the purpose of giving special instruction in reference to agriculture, was brought prominently forward by Gov. FISH in his late message to the legislature. Responding to the recommendation of the Governor, the New-York State Agricultural Society, at its annual meeting in January last, appointed a committee to memorialize the legislature on the subject. A memorial was consequently submitted, in reference to which the Committee on Agriculture for the legislature, brought in a bill, providing,—1. That the State shall appropriate \$50,000 for the establishment of an Agricultural School and Experimental Farm; the object of which shall be "instruction in the sciences, in the theory and practice of agriculture, the breeding, raising and improvement of farm stock, in veterinary treatment, in general farm management, in horticulture and gardening," &c. 2. It proposes that the Governor shall appoint a Board of Trustees, to consist of nine persons, one of whom shall reside in each judicial district, to carry the provisions of the act into effect.

The remaining provisions of the bill we omit for the present, as it is now under discussion, and may receive various modifications in its passage.

MR. VAIL'S SALE OF SHORT HORNS.—We would call particular attention to this sale, an advertisement of which will be found in this number. Mr. VAIL has taken great pains in the collection of his herd,—has imported several fine animals from England at very high prices,—and has purchased others here, including some of the best of Mr. PRENTICE's late herd, at such rates as are always commanded by the best stock. He has also, some choice young animals, of both sexes; and we think those who wish to purchase stock of this breed, can hardly fail to find in this herd, such as will meet their approbation.

NEW IMPORTATION OF SHORT HORN CATTLE.—Col. J. M. SHERWOOD, of Auburn, has lately made an importation of a bull and three heifers, from England. The bull is known as 3d Duke of Cambridge, registered in the fourth volume of the Herd Book as follows:

Third Duke of Cambridge, (5,941,) roan, calved September 14, 1841, bred by Thomas Bates, Kirkleavington, Yorkshire; got by Duke of Northumberland, (1940,) dam, Waterloo 2d, by Belvidere, (1706,) g. d. by Waterloo, (2816,) gr. g. d. by Waterloo, (2816.)

The heifers, which are from eight to ten months old, were all bred by Mr. J. STEPHENSON, of Stockton-on-Tees, who has long been known as one of the most successful breeders in England. Among other superior animals bred by him, may be mentioned the celebrated bull Belvidere, of whose blood, it will be seen, 3d Duke of Cambridge possesses one-half—both the sire and dam of the latter having been begotten by the former.

We had the opportunity of seeing Col. SHERWOOD's animals, as they passed through this city. The bull is certainly one of the finest we have ever seen—whether home-bred or imported—both in respect to perfection of form and handling. The heifers are all fine, and without designing any invidious comparison, we may venture to say that the equals of two of them will be found "few and far between."

FAT ANIMALS.—The markets in Albany presented an attractive display of fine meat on the 22d of February. At the Centre Market, Mr. ED. KIRKPATRICK exhibited the beef of two young cows, (four years old) which weighed,—quarters, hide and tallow,—1200 pounds each. They were raised by Mr. CLEMENT LEACH, of Eaton, Madison county. The finest one appeared to be a cross of the Durham and Devon.

Mr. JAMES MCQUADE showed the carcasses of two fat heifers bred by E. P. PRENTICE, Esq., of Albany, and fattened by Mr. JOHN B. PACKER, of Charlton, Saratoga county. The largest weighed 1400 lbs.

MESSRS. PUTNAM & SHAW, at the North Market, showed the quarters of a pair of very superior oxen, raised by Mr. HENRY RHODES, of Trenton, Oneida county, and fattened by Mr. LYMAN BRAINARD, of Attica. These cattle received one of the premiums at the State Fair at Buffalo. Their live weight was 4912 lbs.—dead weight, beef 3430 lbs.—hides 300 lbs.—tallow 324 lbs.—total weight 4,054, or 2,027 lbs. each. These oxen were a cross of the Devon breed with the common stock—were of extraordinary fitness and great weight in proportion to the bone and offal.

Mr. KIRKPATRICK had the carcasses of six fat sheep, and Messrs. PUTNAM & SHAW the same number, mostly a cross of the Bakewell or Leicester and Cotswold breeds, the weight of which ranged from 100 to 130 lbs. each.

BLOOD HORSE.—An advertisement of the imported thorough-bred horse "Consternation," will be found in this number. He is a fine horse, and we are told that his progeny are very promising.

MORGAN HORSES.—We invite attention to the advertisement of the "Gifford Morgan," and the "General Gifford," to be found in this number. They are both prime animals.

MORGAN HORSE IN OHIO.—We are informed that Mr. N. E. AUSTIN, of Hartford, Trumbull county, Ohio, has procured one of the Morgan horses exhibited at the Show of the New-York State Ag. Society, at Buffalo, by J. HENDERSON of Mendon, Monroe county. This horse, as we are informed, was bred in Vermont. He is an active, well formed animal, showing much of the genuine Morgan spirit and power.

THE CULTIVATOR FOR SMALL FARMERS.—A correspondent at Susquehannah, Broome county, N. Y., writes: "The idea that the Cultivator is more useful to the large farmer than to the small one, I think very erroneous. In the pages of the Cultivator, every man engaged in agriculture, whether he cultivates one acre or one thousand acres, may, in my view, find information worth much more than the money paid for it."

GOOD BUTTER AND GOOD FIRKINS.—Inquiry is frequently made as to the best wood for firkins. In reference to this inquiry, we have before stated that oak, ash, birch, maple, and spruce, if of proper quality and properly seasoned, had been found to answer well. In regard to maple and spruce, we have lately heard of their use by several dairymen who are noted for the fine quality of their butter. The writer is using from a firkin of prime butter made last autumn, by WM. PIERCE,



of Worcester, Otsego county. The firkin was the best of heart spruce, and the butter, which was made in the best manner in the first instance, has kept perfectly sweet. It has not the least taste of the wood, or of rancidity, even where it comes in direct contact with the sides of the firkin. It is proper to remark that the wood alluded to is the white spruce, (*Abies alba*), and not the hemlock, (*A canadensis*), which in some sections is called spruce.

**HUTCHINGS' PANORAMA OF THE SEA AND SHORES OF THE MEDITERRANEAN.**—Having had an opportunity of viewing this splendid work of art, we cannot refrain from calling the attention of the public to it. It is not only beautiful as a picture, but in a high degree interesting and instructive in a geographical view. The representation of places which have long been celebrated in history, conveys to the observer a more correct idea of their situation and appearance than it is possible to obtain in any other way, short of ocular observation.

**LARGE HOG.**—Dr. P. G. BERTOLET, of Oley, Berks county, Pa., informs us that Mr. ISRAEL RITTER, of that place, slaughtered a hog on the 20th of January last, which was seventeen months old, the weight of which, dressed, was 734 pounds.

**EXPORT OF APPLES FROM WASHINGTON COUNTY, OHIO.**—Dr. HILDRETH states that that portion of Washington county bordering on the Ohio river, furnished for exportation, last year, twenty-three thousand barrels of Apples. This is an admirable section for this fruit. The first settlers were from the New-England States, and planted large orchards, of the best varieties known.

**PALMER'S WHEAT DRILL.**—We have received a cut and communication in reference to this machine, which not having arrived in time for this number, we are obliged to postpone to our next.

**ERRATA.**—In Mr. Todd's communication on "Protection of Working-Horses," &c., in our last, p. 94, the transposition of a line occurs. The seventh line from the bottom should have been placed between the tenth and eleventh lines. The nineteenth and twentieth lines from the top, second column, of the same article, should read—and to suffer the penalty of violating a physical law—instead of—and to suffer the penalty of a violent physical law."

### Premiums for Subscribers to The Cultivator.

Our offer of Prizes for subscribers to the current vol. of *The Cultivator*, was intended as an experiment; and though some complaint was made that they were offered for the greatest number, without regard to population, &c., the experiment has equalled our anticipations. With our present experience, we shall be able another year, we hope, to offer a List of Premiums, which will prove satisfactory to all who may be disposed to aid us in extending the circulation of our journal.

According to the conditions, (for which see last page of Jan. or Feb. Nos.) the Prizes for this year are awarded as follows:

1st. To James M. Tower, Waterville, Oneida Co., N. Y., for 102 subscribers, \$50.

2d. To Hon. Anthony Van Bergen, Coxsackie, Greene Co., N. Y., for 97—\$40.

3d. To C. T. Alvord, Wilmington, Windham Co., Vt., for 90—\$30.

4th. To Jas. Wells, Johnstown, Fulton Co., N. Y., for 87—\$20.

5th. To O. C. Chamberlain, Richfield Springs, Otsego Co., N. Y., for 67—\$10.

6th. To P. Kirkpatrick, Hobart, 66—Willets Keese, Peru, 57—C. P. Waller, Honesdale, Pa., 52—A. Carey, Fort Plain, 51. and Geo. Hezlep, Gustavus, O., 51—for the five next highest lists, each the 1st and 2d vols. of the Horticulturist, bound.

7th. To James D. Spinner, Herkimer, 48—L. W. Curtis, Madison, 45—H. Mills, Lowville, 43—Jas. La Roche, Wilmington, Del. 42—M. Davis, Jr., Lynchburgh, Va., 41—B. Macomber, Grand Isle, Vt., 40—Thomas Briggs, Jr., Kingston, Can., 39—Wm. H. Woodburn, Newville, Pa., 36—C. F. Mallory, Romeo, Mich., 33, and Wm. H. White, Vergennes, Vt., 34—for the next ten highest lists, each, a copy of the 2d vol. of the Horticulturist, bound.

8th. To H. B. Tracy, Norwichtown, Ct.—S. Brainerd, Cedarville—J. M. Hart, Oswego—R. A. Tappan, Newark Valley—W. S. Maynard, Ann Arbor, Mich.—Charles Root, Gilbertsville—F. H. Fessenden, Brattleboro, Vt.—J. Brown, Battle Creek, Mich.—R. S. Bartlett, Binghamton, and E. D. Freeman, Amenia—for the ten next highest lists, each, vols. 5 and 6 of *The Cultivator*, for 1838 and 1839.

9th. To Wm. McKinney, Ida Mills—L. Richmond, Woodstock, Vt.—J. H. Reid, Frederickton, N. B.—D. R. Wheeler, Ellicottville—O. Stevenson, Pleasant Mount, Pa.—John M. Sands, Pleasant Valley, Pa.—A. A. Mullett, Springdale, O.—M. Heminway, Watertown, Ct.—C. Babbitt, Walpole, N. H., and Wm. Bailey, Spencerstown—for the ten next highest lists, each, a copy of Downing's Fruits and Fruit Trees, or any other work of like amount.

10th. To W. S. Carter, Quechee Village, Vt.—D. S. Curtis, Canaan Centre—Edward Mattoon, Westerville, O.—Charles Anderson, Allegany City, Pa.—A. N. Barber, Harwinton, Ct.—J. A. Ely, Poughkeepsie—Geo. Edwards, Bath—L. Helmer, Ilion—J. Miller, Schoharie, and F. E. Stowe, Bruceville, O.—for the ten next highest lists, each, a copy of Thomas' Fruit Culturist.

### Prices of Agricultural Products.

New-York, March 22, 1849.

**FLOUR**—Common State and Michigan, per bbl., \$5.37a\$5.50—Fancy brands, \$6.12a\$6.50.  
**GRAIN**—Wheat, per bush., \$1a\$1.12—dull. Rye, 60a61c Indian Corn, Northern, 59a60c.—Southern, 53a56c.  
**BUTTER**—best, per lb., 20a22c.—western dairy, 14a17c.  
**CHEESE**—per lb., 6a7½c.  
**BEEF**—Mess, per bbl., \$11.50a12.50—Prime, \$7.50a\$8.75.  
**PORK**—Mess, per bbl., \$11.12a\$11.50—Prime, \$9.25.  
**LARD**—per lb., 6½a7½c.  
**HAMS**—Smoked, per lb., 8½a10½c.  
**HEMP**—American dew-rotted, per ton, \$155-160.  
**TOBACCO**—per lb., Kentucky, 5a\$.  
**COTTON**—Upland and Florida, per lb., 6½a7½—New Orleans and Alabama, 7a9c.  
**WOOL**—(Boston prices.)

Prime or Saxon fleeces, per lb., 40a43c.  
American full blood Merino, 36a38c.  
" half blood do., 31a33c.  
" one-fourth blood and common, 29a30c.

**REMARKS.**—There is a steady demand for breadstuffs, and considerable stir in the pork trade. Nothing special to note in other parts of the market.

### Fishkill Landing Nursery,

Two and a-half miles North from the Newburgh Ferry.

### FRUIT AND ORNAMENTAL TREES.

**THE** subscriber respectfully solicits the attention of Fruit growers and dealers in Fruit Trees to the large stock offered for sale by him this spring, consisting of

20,000 APPLE TREES, of the most approved varieties, from 4 to 8 feet high, at from \$15 to \$20 per hundred.

10,000 PEAR TREES, embracing one hundred of the best varieties to be found, 3 to 7 feet high—\$25 to \$34 per hundred.

8,000 CHERRY TREES, from one to three years from the inoculation, 4 to 10 feet high—\$31 per hundred.

5,000 APRICOT TREES, of the best sorts, on peach and plum stocks; 2,000 of which are the Early Golden, a very hardy and productive variety, one to three years from the buds—\$12.50 on peach, and \$31 on plum stocks per hundred.

30,000 PEACH TREES, of the most valuable sorts, entirely free from disease, one to two years from the inoculation. \$6 to \$8 per hundred.

5,000 ISABELLA AND CATAWBA GRAPE VINES, two to four years old, with fine roots. They have been annually cut back, and are in excellent condition for vineyard planting—\$12 to \$18 per hundred. Also,

1,000 QUINCE TREES, mostly of the Apple variety. Currant and Raspberry Bushes, Strawberry Vines, &c., together with about 10,000 Deciduous and Evergreen Ornamental Trees, many of which are extra large.

The subscriber is induced to sell at the very low prices above named, in consequence of the stock being very large. All those who are about planting orchards, starting nurseries, or engaged in the sale of trees, are invited to visit and inspect his stock. The Fruit Trees have been inoculated under the immediate inspection of the proprietor, and mostly from trees in his own grounds, and are of the most valuable standard sorts.

From 40 to 50 acres attached to the Nursery are closely set with standard and specimen trees, which greatly increase his facilities for the attainment of correctness.

The new and valuable Peaches which have within a few years past originated at the South, as well as the choice Apples of the West, have been propagated, and are of a fine size for transplanting.

### TREES, SHRUBS AND VINES

when ordered, will be taken up carefully, and packed so as to be sent safely to any part of the Union.

Catalogues sent to all post paid applicants. Orders, by mail or otherwise, will receive immediate attention.

DANIEL BRINCKERHOFF.

Fishkill Landing, April 1, 1849.—It.

### Valuable Property for Sale.

**THE** undersigned offers for sale in one body, or in portions, or for Lease to tenants well recommended, the well known **CARPENTER'S POINT FARM** and Fisheries, situated in Cecil Co., Md.—at the head of the Chesapeake Bay, and on the west bank of the North East River. The shores command the waters both of the bay and the river, and are among the most valuable in the State; they include a number of the buildings and sheds necessary for the active prosecution of the fisheries; the land is of easy cultivation, and enjoys the advantage of ready access by water communication, to the markets of Havre de Grace and Baltimore. The entire tract contains about 650 acres, of which some 125 are under actual cultivation, as many more lying out as common, whilst of the remainder, one half has been recently cleared and the other is very heavily timbered.

For further information, or for wood-cut map showing the position and shape of the property, and the prominent places in its vicinity, application may be made to George Earle, Elkton, Md.; J. F. Houston, Columbia, Pa.; J. S. Skinner & Son, Philadelphia; the office of this paper, or to

J. HOWARD McHENRY,

April 1.—It \*

Balt.more.

## Short-Horns at Auction.

THE subscriber being about disposing of 50 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr. Woodaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq., of Yorkshire, Eng., from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opinion, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

"The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given—say 6 to 12 and 18 months, if desired. The particulars will be given in the pedigree list.

GEO. VAIL.

Troy, April 1, 1849.—3t.

## Farm for Sale.

THE subscriber will sell his farm of 300 acres, situate near the centre of the town of Hillsdale, in the county of Columbia, known as the

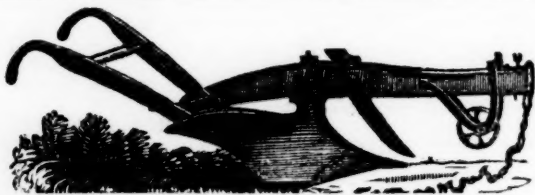
## MCKINSTRY PLACE,

Having been possessed by that family about a century, lying adjacent or contiguous to the route of the Harlem Railroad, and upon which there are 2 good and convenient dwelling houses, one a recently built cottage, and barns, sheds, lofts, and numerous out houses, two wells of pure soft water of a superior quality, excellent orchards of grafted fruit, fine stone wall fences, some first rate fields for any kind of grain, about 45 acres of meadow land, and about 80 acres of wood land, well watered by springs; three small streams run through it, the head waters of the Roeliff Jansen's Kill or Creek rendering it a desirable farm for grazing, and valuable to practical farmers for other purposes of husbandry. It is capable of being divided into two good farms. Title made unquestionable by the undersigned, with the aid and assent of Judge Augustus Tremain, who now resides on the premises; land now worked and occupied by Mr. James Darrow. The farm is now well stocked with Devonshire cattle, and a choice flock of Saxon sheep, which, together with the farming utensils, will go with the old Homestead, if the purchaser wishes.

JUSTUS MCKINSTRY.

If desired, one-third or one half of the purchase money can remain on bond and mortgage for a term of years.

Hudson, April 1.—2t.\*

Agricultural Ware House,  
193 Front Street, New York.

THE subscriber, manufacturer and dealer in Agricultural Implements, offers for sale a large assortment of Plows, embracing over 200 different sizes and patterns, among them the superior Premium Plow, which received the highest premium of the American Institute in 1848, and of the great State Fair in 1847.

This Plow has no equal for lightness of draft, and for all purposes, is recommended with full confidence as being the best in use.

He has also the Centre Draft and Eagle Plows, which will be sold at the lowest rates.

Also, Cultivators, Straw Cutters, Corn Shellers, Fanning Mills, Grain Cradles, Corn and Cob Mills, Portable Grist Mills, Horse Powers, Threshing Machines, and a general assortment of Farming and Gardening Implements, all of which will be sold at extremely low prices.

Brass and Iron Wire Cloth Sieves, Screens, &amp;c.

Bone Dust and Guano.

JOHN MOORE,

April 1.—2t.

193 Front street, New York.

## The old Morgan Gifford,

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms \$25, \$5 of which to be paid at the time of service, and the remaining \$20 if the mare proves in foal. Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.

March 1, 1849.—5t.\*

## The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; on Saturdays, at the stable of John C. Munro, in Bellisle.

Terms, \$10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the \$10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action, General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19.

MUNRO &amp; MASON.

April 1, 1849.—3t.

## The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stutenham, Yorkshire, England, in the year 1841. He was imported by C. T. Abbott, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences, will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position. He is compact and short-legged, yet of a rangy and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro—her dam by Waxy; Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle; Henry Rhodes, Trenton; A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms \$5 in advance, and \$5 additional if the mare is got in foal. April 1.—3t.

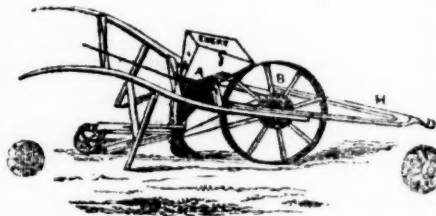
J. B. BURNET.

## To Wool Growers.

A Gentleman who owns 6,000 acres of land in the southern part of the State of Pennsylvania, would like to make an arrangement with a practical man who has the ability to stock part of it on joint account. Any one disposed can address for further information, W. E. T. No. 17 South Water St., Philadelphia.

April 1.—1t.\*

## Emery's Albany Seed Planter.



THE subscriber having had all his patterns for this machine, as also nearly one hundred machines mostly completed destroyed by the late fire, has made an entire new set, with several important im-

provements suggested by their use during the last three years. He is now enabled to offer a much better planter than heretofore, notwithstanding it has already earned the reputation of being "the best planter in use."

Orders solicited and machines warranted.

Albany Agricultural Warehouse, Nos. 369 &amp; 371 Broadway

H. L. EMER.



### Wheeler's Horse Powers, Threshers and Separators.

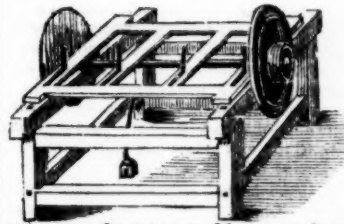
CONTINUED FROM MARCH NO.

For Engravings and Descriptions of these machines, together with prices, &c., see the March No. of The Cultivator, page 102. For further information respecting them, the public are referred to the following persons who have purchased of me and are using the said machines:

#### NEW-YORK.

*Albany*—James McNaughton, John McD. McIntyre, Amos Osborn and E. C. Delavan.  
*Auburn*—Joseph Scantlebury.  
*Buffalo*—T. C. Peters & Brother and Edward Cowles.  
*Ballston*—John Talmadge.  
*Berne*—Paul Haverly.  
*Bethlehem*—Peter Magee.  
*Canajoharie*—James Gordon.  
*Central Ridge*—Jacob Enders.  
*Charlton*—Charles Gilchrist and Thomas Kirby.  
*Caroline*—Herman Landon.  
*Coeymans*—James J. Mull and Samuel T. Morris.  
*Chesterville*—Christopher Filkins.  
*Duanesburgh*—Alexander Millan, Thomas Knight, Jas. Lendum and James Vaudervier.  
*Esperance*—L. & J. Rockwell.  
*Ellicottville*—Wm. Somerville.  
*Florida*—Samuel C. Jackson.  
*Fonda*—Reuben Howe.  
*Greenbush*—J. P. & G. W. Luther, Andrew Phillips and David Harrington.  
*Greece*—Robert Sherman.  
*Grove Centre*—Darius Scovill.  
*Grovermont*—Patrick Hughes.  
*Genoa*—James Dunn.  
*Illion*—Samuel Barringer and Rudolph Getman.  
*Johnstown*—Edward Wells.  
*Knox*—John Basler.  
*Knoxville*—John Dyer and Andrew Batchler.  
*Lafargeville*—J. N. Rottiers.  
*Leatherville*—Samuel J. Walker.  
*Mechanicsville*—Frederick & George Edwards, and Samuel R. Mott.  
*Middlebury*—Nathaniel Manning.  
*Minerva*—James Herrick.  
*New Scotland*—Peter McHarg, John H. Johnston, Peter S. Markle, Andrew Onderdonk and J. V. N. Houghtaling.  
*New York*—A. B. Allen & Co., (10 sets.)  
*Oswego*—Hamilton Murray.  
*Owego*—George J. Pumpelly.  
*Palatine*—John A. Zoller and Christian Snell.  
*Plattsburgh*—James McCreedy.  
*Port Jackson*—S. Thorn.  
*Reidsville*—Hamilton and John Hempstead.  
*Rensselaerville*—Abner West, Square Cook, Luther Hazard, Benjamin Palmer and Erastus Cooke.  
*Ridgway*—Wm. F. Potter.  
*Root*—Henry Lyker and Robert J. Mitchell.  
*Schoharie*—Jacob H. Best, John Phillips and Wm. Hagerman.  
*Schoharie Court House*—Abram Deitz and Martin L. Shaffer.  
*Schaghticoke*—Ira Gifford and Amos Briggs.  
*Schenectady*—A. H. Ostrander, M. E. Myers, Isaac Vedder and A. L. Linn.  
*South Danby*—E. L. B. Curtis, (2 sets.)  
*Scottsburgh*—Charles Brewer.  
*Sparta*—Benjamin Bonner.  
*Summer Hill*—George Newton.  
*Schoharie*—Charles Frink.  
*Troy*—Henry Warren, (4 sets.)  
*Weedsport*—Aaron Bayles and Peter Douglas.  
*West Charlton*—Robert Gilchrist.  
*Washington*—Levi G. Collins.  
*Westerlo*—Hamilton Ford and Hiram Hempstead.  
**VERMONT**—W. Brown, Alburg—Pierce, Davy & Co., Burlington—A. L. Hatch and D. E. Griswold, (4 sets,) Grand Isle—Dyer Hill, Isle La Motte—John Wood and Loyal Huntington, Middlebury—Timothy D. White, South Hero.  
**MASSACHUSETTS**—P. Howard, Ashby—Ruggles, Nourse & Mason, Boston—W. H. H. Sigourney, Grafton—Horace Emery, Townsend—D. A. Wood, Webster—Paul Whitin & Son, Whitinsville—J. C. Morse, (4 sets,) Worcester.  
**RHODE ISLAND**—J. L. Durfee, Newport—Philip Almy and David Almy, Portsmouth.  
**CONNECTICUT**—C. A. Hotchkiss, New Haven—S. J. Stoddard, South Britain.  
**PENNSYLVANIA**—M. Bell, Hollydaysburgh—L. & R. Styles, Troy.  
**SOUTH CAROLINA**—John N. Scofield, Columbia.  
**VIRGINIA**—J. Hardesty, Harrisonburgh—W. Peters, Georgetown, D. C.  
**OHIO**—Samuel Monk, Cincinnati—John Howell, Huntsburgh—J. V. Stanhope, Kinsman—E. T. Osborne, (2 sets,) Sandusky—John Stouffer, Xenia.  
**INDIANA**—Otis Hinkley, Mount Vernon.  
**ILLINOIS**—Dav. Hughes, Antioch—J. A. Wight, (4 sets,) Chicago—George H. Easton, Half Day—Elijah Willard, Jonesborough.  
**MICHIGAN**—J. L. Smith, Lexington—J. A. Austin, Portsmouth.  
**WISCONSIN**—D. & M. Conover and H. B. Hawley, Milwaukee.  
**CANADA EAST**—R. N. Watts, M. P. P., Drummondville—Francis Erby, Batiscan.  
**CANADA WEST**—James Croil, East Williamsburgh—Donald Mc Donnell, St. Andrews.

#### Emery's Saw Mill.



THE Mill is made strong with joint bolts, patent metallic boxes, large and long shaft and heavy fly wheel, and may be used with the single or double Horse Power. For Single Power, a 22 inch saw is used; for a Double Power, a 24 inch saw, and with the One Horse Power and

two men, from ten to fifteen cords of hard wood may be cut twice in two per day, or as much soft wood as they can handle.

The same Mill, by changing saws, can be used for slitting boards and plank for fencing, &c.

Price, with 22 inch saw, in complete running order, \$35.

#### Grant's Fanning Mill.

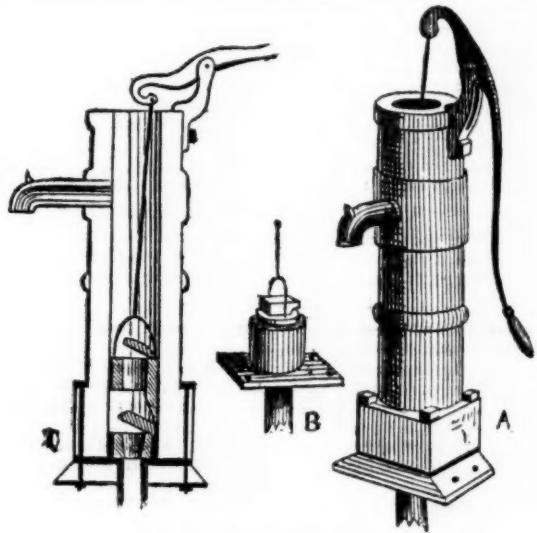
THIS is considered one of, [if not] the best mills in use. It is equally well calculated for all kinds of grain, clover and grass seeds. It may be operated by hand or horse power. The largest size, when attached to the Horse Power, with one person to feed it, is capable of cleaning perfectly one hundred bushels of wheat per hour, as it comes from the separator of the threshing machine. This Mill has received the first premium at four of the New York State Fairs, also at the State Fair of Maryland and Pennsylvania. Certificates are unnecessary, as all mills are warranted. Price for No. 1, \$21; No. 2, \$23; No. 3, \$25; No. 4, \$27; with pulleys, \$30. The above Machines are for sale at the

#### Albany Agricultural Warehouse & Seed Store,

Nos. 369 & 371 Broadway, Albany, N. Y.

HORACE L. EMERY

Price and descriptive catalogues, Gratis.



#### Adams' Patent Pump.

THE above cut represents the most approved and simple arrangement for well or cistern pumps—at the same time combining cheapness and durability, and little or no expense for repairs.

It having been extensively used in many sections of the country for ten years, its excellence has been established beyond a doubt.

The manufacturer recently received a diploma for its being the "best pump," from the Massachusetts Charitable Mechanics Association at Boston.

It being made of saturated wood, and water proof, it neither freezes, splits or decays. It is readily connected with lead pipe of any size, by means of a solid metallic flange and cup, as seen at B. in the cut—the lower box and valves are set within the cup, and all inserted in the lower end of the barrel of the pump—until the flange (by means of melted resin) makes a water proof and tight joint with the barrel; when a base board (with a hole through the centre for the passage of the supply pipe) is bolted firmly against the under side of the flange; thus forming a strong and permanent connexion.

The valves are so constructed that by throwing up the handle the upper box trips the lower valve, and the water instantly falls back—leaving the pump empty. Rights for making and using the pump in this State and the Western States, can be obtained by addressing the subscriber. They will be furnished to the trade at wholesale or retail, on as reasonable terms as any metallic pump.

HORACE L. EMERY.

No. 369 & 371 Broadway, Albany, N. Y.

**A Book for Everybody.****COLE'S AMERICAN FRUIT BOOK.**

S. W. COLE, Esq., Author of the popular work, entitled *The American Veterinarian*, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

**COLE'S AMERICAN FRUIT BOOK:**

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

FIRST—It is a mature work and a practical one, one upon which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for

**THE PEOPLE.**

SECONDLY—It will have an unprecedented sale on account of its cheapness. It makes a volume of 288 closely printed pages. Illustrated with nearly 200 beautifully executed engravings, by Brown, and is sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It contains full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

**BOOK FOR EVERYBODY,**

As well for the man who eats Fruit as for him who raises it.

This valuable work is just from the press, and is now for sale at our counter, and will be offered for sale by our regular agents throughout the country.

JOHN P. JEWETT, Publisher, 23 Cornhill, BOSTON.

April 1.—2t.

**Highland Nurseries, Newburgh, N. Y.**

(Late A. J. Downing & Co.)

**FRUIT AND ORNAMENTAL TREES, &c.**

THE undersigned beg leave to tender their acknowledgments to the patrons of this establishment, and the public in general, for a continuation of the extensive patronage bestowed on their predecessors. Their greatest ambition is to merit, in every respect, the high character which the nurseries have attained from the high standing of the former proprietors.

The subscribers, desirous of meeting the constantly increasing demand for the trees grown here, have already stocked nearly 20 acres of ground, in addition to the nurseries of the former firm, (A. J. D. & Co.) among which are all the recent introductions of merit, both of this country and Europe.

Their stock of trees for spring planting is unusually large and fine, especially of all the *proved* and standard varieties.

**10,000 to 20,000 APPLE TREES,**

Three to four years from the bud; all budded on two to three year transplanted strong stocks. Trees eight to ten feet high, \$25 per 100; and trees five to 8 feet high, \$18 to \$20 per 100.

**10,000 PEAR TREES,**

Embracing all the best and newest varieties, four to seven feet high, \$45 to \$50 per 100.

Also, a large stock of all the choicest and rarest kinds of Plum, Cherry, Apricot, Peach, Nectarine, and Quince Trees, &c., &c., together with a general assortment of Gooseberries and Currants, (all the new kinds.)

Grape Vines, Raspberries, Strawberries, Esculent Roots, &c. For prices, see Catalogue, supplied gratis on application, (*post paid*.)

A large stock of Evergreen and Ornamental Trees, Shrubs, &c., suitable for the embellishment of new grounds, street planting, &c., at very moderate prices.

Two year old Buckthorn and Osage Orange Plants, for hedges.

Portugal Quince Trees, standard high, six feet each, \$1 00

do do Quenouille, do 1 00

Angers, (true,) do do 1 00

Smaller trees of the above, 0 50

Orders respectfully solicited, and will receive prompt attention. Trees will be packed with the greatest care, and shipped to any part of the Union or Europe.

A. SAUL & CO.

Highland Nursery, Newburgh, March 1, 1849.—1t.

**Portable Self-Acting Cheese Press.**

Patented August, 1847, by Chester Stone.

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only \$7 to \$10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell in any parts of the counties of Saratoga, Washington, Seneselaer or Columbia, apply to

H. VAN OSTRAND.

March 1, 1849.—1t.

West Milton, Saratoga Co., N. Y.

**TREES! TREES!****COMMERCIAL GARDEN AND NURSERY**

Of Parsons & Co., Flushing, near N. Y.

THE Proprietors of this Establishment, invite public attention to their large assortment of every desirable variety of

**FRUIT AND ORNAMENTAL TREE OR SHRUB.**

Their importations of everything new in Europe are annually continued, and they offer a very large variety of

**ORNAMENTAL TREES AND SHRUBS,**

imported expressly for arboreta and pleasure grounds. Their collection of Roses is annually enriched by novelties from abroad, many of which may be found described in their new work on the Rose, recently published.

**FRUIT TREES**

Receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors, at Flushing, near New-York, where Catalogues will also be furnished.

They have formed a branch at Brighton, near Boston, and by the entire success of their trees transplanted thither, have thoroughly proved the superior adaptation of Long Island trees to the soil and climate of any part of New England.

At the season of transplanting, a salesman will be at this branch to furnish those who may prefer obtaining their supply thence.

March 1.—2t.

**Fruit Trees.**

THE subscriber would announce to the public that he has for sale at his nursery, a general assortment of Fruit Trees, embracing nearly all of the choicest kinds, all of which have been obtained from the most reliable sources, or from bearing trees of well known varieties, and propagated with his own hands in the most careful manner; and a large quantity have been proved on his own grounds. His stock of apples especially, is unusually large and fine, and will be sold at reasonable prices, with a liberal discount to nurserymen and venders of trees. Persons at a great distance, wanting small trees, will be supplied at a corresponding price.

Scions for grafting or budding, of all the most rare and scarce varieties, at \$1 per 200, with a discount where 50 or 100 varieties are ordered. And large quantities of the more plentiful kinds, at reduced prices, in proportion to quantity.

Red Antwerp Raspberries by the 1,000, cheap.

Catalogues gratis to all post paid applicants.

Canterbury, Orange Co., N. Y., —2t.

C. HAMILTON.

**To Nurserymen, Gardeners, and Horticulturists generally.**

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes, by a strict attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq., and A. Saul & Co., Newburgh; H. Reid, Murray Hill, N. Y., and Elizabethtown, N. J.

GEO. G. SHEPPARD.

143 Maiden Lane, New-York.

N. B. Orders for Russia Mats. for Budding or Packing, immediately supplied.

New-York, March 1, 1849.—2t.

**Agricultural Warehouse and Seed Store,**

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample

T. C. PETERS & BRO

Buffalo, Dec 1—6t.

**Red Antwerp Raspberries.**

5,000 Plants of the true Large Red Antwerp Raspberry, for sale by the subscriber, at \$6 per hundred or \$50 per thousand. The Plants are large and strong, and warranted true.

S. A. BARRETT.

Milton, Ulster Co., March 1, 1849.—1t.\*



**Thorp, Smith & Hanchett,**  
(Late Thorp & Smith.)

**Proprietors of the SYRACUSE NURSERIES,**

**H**AVE now ready for sale a very extensive stock of the most valuable kinds of **FRUIT TREES**, embracing most of the standard varieties, (including those most highly approved and recommended by the late Pomological conventions at New-York and Buffalo,) which, in *vigor, thriftiness and symmetry* of growth are not excelled by the productions of any other nursery in the State. Having more than *forty acres* now chiefly devoted to the cultivation of **FRUIT TREES**, they are prepared to sell at **WHOLESALE** as largely, at prices *as low*, and on terms *as reasonable*, as any other nursery establishment here or elsewhere. The superior quality of their trees must continue to recommend them to amateurs, who desire to unite ornament with utility; and to orchardists, whose chief aim is to obtain such only as are healthy and vigorous.

They have also, a large assortment of finely formed **ORNAMENTAL TREES**, and several thousand **Seedling Horse Chestnuts**, at very moderate prices.

Orders will be promptly attended to, and trees packed safely for transportation to any distance.

Catalogues furnished *gratis*, to all *post-paid* applications. They may also be obtained, and orders left at the store of M. W. Hanchett, between the Railroad and Syracuse House. Syracuse, March 1, 1849.—3t.

**To Nurserymen, Orchardists and Gardeners.**

**T**HE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitae, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolf, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburg grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

Descriptive priced lists sent to post paid applicants.

Feb. 1—4t.

B. M. WATSON.

**A Virginia Farm**

**F**OR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat, corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear cherry and peach trees—many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern and physician quite near. Also, a market for all kinds of fowls, meats and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given, by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York.

March 1, 1849.—2t.

**To Farmers.**

**T**HE LODI MANUFACTURING CO., have now on hand and ready for sale, a large quantity of their **NEW AND IMPROVED POUURETTE** freshly manufactured.

They guarantee that every barrel or bushel they sell contains 66 per cent of night soil, and point to a reputation of ten years standing, as well as to the heavy outlay of capital in their business, as in some sort a surety against imposition.

Considering night soil as the *strongest ingredient* in their Poudrette, their mode of manufacturing is simply to disinfect and add sufficient vegetable fibre to absorb moisture.

Two barrels (\$3 worth) will manure an acre of corn in the hill, planting four feet apart each way. One application is sufficient on good ordinary ground. On poor ground a second application is sometimes necessary to ensure a good crop. This manure has advantages in its use over guano or other manures, being the cheapest and quickest in operation. Corn manured with it will grow more vigorously, and mature earlier—while the yield is heavier in proportion.

Four bushels struck measure, are packed in a barrel. It will be sold at the following prices, delivered in New-York free of cartage or other expense: 1 bbl. \$2—3bbls \$5, 7 bbls. \$10.50, and at the rate of \$1.50 per bbl. for any larger quantity. At the Factory, 25 cents per bushel will be charged. A trial is respectfully asked.

All orders containing a remittance, with directions to ship, will be immediately attended to.

Apply, if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York. March 1.—2t.

**Chemical Manure**

Manufactured by "the George Bommer New-York Manure Co."

**T**HIS manure is made chiefly of Fæcal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fæcal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fæcal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

**PRICES, TAKEN AT THE FACTORY:**

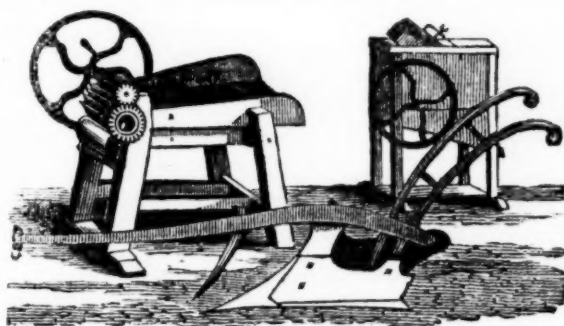
37½ cents per bushel, without package;  
50 cents per bushel, packed in Barrels, or  
\$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



**John Mayher & Co.**

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

**W**HERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine the stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

**Agricultural Books,**

Of all kinds, for sale at the office of The Cultivator.

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## NOW IN THE PRESS,

TO BE PUBLISHED BEFORE THE CLOSE OF THE MONTH,

## THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

## ALL THE VALUABLE INFORMATION

known at the present time, relative to

## FRUITS AND FRUIT CULTURE.

It will contain more than

## TWO HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

## EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole will form a handsome duodecimo volume, at the low price of One Dollar. April 1, 1849.

## Field and Garden Seeds.

A FULL and complete assortment of Field and Garden Seeds, warranted fresh and true of their kind.

A. B. ALLEN &amp; CO.,

April 1.—1t. 189 &amp; 191 Water street, New York.

## Genuine Eagle Plows.

AS many spurious Plows from this city and elsewhere, are sold under the name of "Eagle," Farmers and Dealers are cautioned if they wish to obtain the genuine EAGLE PLOW, that they will always find "Ruggles, Nourse and Mason, Boston and Worcester," and "A. B. Allen & Co., New York," branded on the beam.

The subscribers being sole agents in New York for the above Plows, offer them for sale at the manufacturer's prices. Also, those of Minor, Horton & Co., and many others of the best and most approved kinds, making the largest and finest assortment to be found in the United States.

Other Agricultural and Horticultural Implements of all kinds for sale. A. B. ALLEN & CO.,

April 1.—1t. 189 &amp; 191 Water street, New-York.

## Five Hundred Tons of Peruvian Guano,

FRESH from the Chinche Islands, for sale in lots to suit purchasers. Farmers will do well to be on their guard, of whom they purchase guano, as much is sold under the name of Peruvian which is spurious, and almost entirely worthless. To avoid imposition, each bag containing genuine Peruvian Guano, will have the brand of A. B. Allen & Co., Agricultural Warehouse, 191 Water Street, New-York.

Also Bone dust of superior quality, at 40, 50 and 55 cents per bushel. Poudrette, Plaster of Paris, Lime, and Patagonian Guano.

A. B. ALLEN &amp; CO.,

April 1.—1t. 189 &amp; 191 Water street, New York.

## Albany Agricultural Warehouse,

Removed to 369 Broadway.



THE ALBANY AGRICULTURAL WAREHOUSE having been burnt in October last, and with it nearly the whole stock of Implements and Seeds, the subscriber has removed to the new and spacious store, No. 369 and 371 BROADWAY, where he is now prepared to supply all orders for Improved

## AGRICULTURAL IMPLEMENTS, SEEDS, &amp;c.,

Of which he has an entire new supply; and with increased facilities, and a better location for business, he solicits a continuance of the liberal patronage thus far extended to the establishment.

No. 369 Broadway, Albany.

H. L. EMERY.

Catalogues gratis on application by mail, &amp;c.

## Osage Orange Seed,

WARRANTED good, and sure to grow if managed according to the directions furnished to purchasers, for sale. Price \$25 per bushel, \$7 per peck, or \$1 per quart; Payment to accompany the orders. Packages can be sent by express during winter, via Cleveland, Buffalo, &c., or via Wheeling, Baltimore, &c., or via Cincinnati, to all places on the Ohio and Mississippi rivers.

M. B. BATEHAM.

Ohio Cultivator Office, Columbus O., April 1.—2t.

## Early Potatoes, Polish Oats,

SPRING Wheat, Rye, Barley, Seed Corn, various kinds, for sale at the Albany Agricultural Warehouse.

H. L. EMERY.

## Fruit and Forest Trees.

SHRUBBERY, Buckthorn and Osage Orange Plants, of one and two years' growth, Strawberry Plants, Grape vines, &c., &c., for sale at the nursery, corner Delaware turnpike and Morton St., Albany.

Orders left on the premises, or at H. L. EMERY'S Agricultural Warehouse, No. 369 and 371 Broadway, Albany, will meet with prompt attention.

Albany, April 1, 1849.—2t.

## Wendell's Mottled Bigarreau Cherry.

Described page 199, Am. Journal of Agriculture and Science.

THE subscribers offer for sale this spring, trees of the above new and choice variety of Cherry so much sought after by the admirers of this choice fruit. Price \$1.

Also, their usual supply of

## FRUIT TREES

viz: Apples, Plums, Pears, Peaches, Cherries, Apricots, Quinces, extra size. European Mountain Ash, and other Ornamental trees.

A liberal discount made to those who purchase in large quantities.

WILSON, THORBURN &amp; TELLER,

April 1.—2t. Nurserymen, Albany.

## Fruit Trees for Sale.

THE subscriber has for sale this spring, a large and fine lot of the

## GOLDEN APRICOT TREES,

Which he will sell as low as the same kind can be bought elsewhere. Also, a large and general assortment of Fruit Trees, Grape Vines, and Quince Bushes; among which are several thousand of the Frost Gage Plum trees.

Trees taken up and packed in the most careful manner.

An agent will be sent through the Erie canal at its opening who will safely deliver any packages of trees as directed.

CHARLES DU BOIS.

Fishkill Landing, April 1, 1849.—1t.

## THE CULTIVATOR

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12  
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